

AMERICAN BUILDER

THE WORLD'S GREATEST BUILDING PAPER

A SIMMONS-BOARDMAN PUBLICATION

Vol. 46.

CONTENTS FOR MARCH, 1929

No. 6.

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PROTECTION FOR OUR READERS—The publishers of the AMERICAN BUILDER reserve the right to decline any advertising they believe is detrimental to the interest of its readers; to edit advertising copy and to change or eliminate any statements that reflect injuriously or cast discredit upon other building products, machinery, equipment, supplies or tools.

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MEMBER OF THE AUDIT BUREAU OF CIRCULATIONS
AND OF THE ASSOCIATED BUSINESS PAPERS

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RIGHT NOW is YOUR opportunity to— **Make Money Screening Porches!**

RIGHT NOW there lies within your grasp an exceptional profit opportunity in the installation of screened porches. Many, right in your neighborhood, are in need and can be shown how easy it is to add a delightful room of comfort—a screened sun porch or an outdoor sleeping room, or both.

Home owners prefer PEARL wire cloth because of its beauty and durability. PEARL is highly rust-resisting—made so by a process *exclusive with us*. No competitor can use this process, consequently no imitation of PEARL can be “just as good.”

Clean, Sanitary, Easy on the Eyes, firmly woven so as to make no-bag, no sag screens, requiring no painting, PEARL is the most economical, as well as the most handsome, screen wire cloth on the market today. *Outwears Galvanized Wire Cloth several times.*

To assist you in pointing out to your prospect the simplicity of construction and installation of screened porches, we have prepared a Blue Print of a Porch Plan which we will send free.

We have a dealer in your town. See him or write us if you are interested in permanently screening doors, windows or porches. Samples and literature **FREE**.

Address Dept. “A”

The Gilbert & Bennett Mfg. Co.

New York Georgetown, Conn. Chicago Kansas City

PEARL is made in Regular Grade (12 x 13 Mesh) and 14, 16, 18, 20, 24 and 30 Mesh, also Extra Heavy Grade (14 Mesh only)
The best hardware dealer in your city sells “PEARL”

MAIL THIS COUPON

The Gilbert & Bennett Mfg. Co.
Dept. “A”—Box 760
CHICAGO, ILL.

Gentlemen:

Please send complete information on PEARL WIRE CLOTH and PLAN for screening porches to

NAME.....

STREET.....

CITY.....STATE.....





Slide the doors in

One of these methods will
take care of any condition



Slidetite hardware is made for 2 to 10 garage doors and for openings up to 30 feet wide. Regardless of width, there's no center post. *Slidetite* equipped doors cannot shrink or swell, stick, sag or work on rusty hardware, for it's all inside the garage.

GARAGE door installations seem so simple that it is just as easy to make a mistake in choosing the method of operation as it is to select the right one.

You cannot make a mistake if you specify R-W hardware. R-W experts have perfected many methods that meet all garage door requirements. Four of them are illustrated here.

Slidetite equipped doors (upper left) are so easy to operate that a child can open and close them. All the hardware is *inside* the garage where it will work better and last longer—away from wind and snow and rain and sun.



s inside

Slideaside (upper right) is frequently the method specified when a garage is not deep enough to fold the doors inside. The doors slide around the corner against the wall, regardless of the distance from door jamb to side wall.

Both *Slidetite* and *Slideaside* equipment provide for an entrance door—does away with the expense and inconvenience of a separate entrance. R-W garage door hardware eliminates center posts, leaving a clear and unobstructed full width opening. Doors are adjustable—always fit and snug.

R-W door hardware, the largest and most complete line made, solves any and every doorway problem you'll ever meet.

Richards-Wilcox Mfg. Co.

"A Hanger for any Door that Slides"

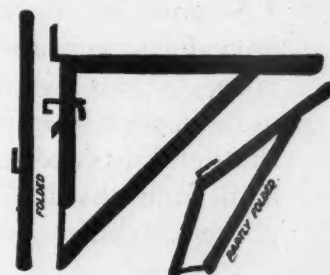
AURORA, ILLINOIS, U.S.A.

New York Boston Philadelphia Cleveland Cincinnati Indianapolis St. Louis New Orleans
Chicago Minneapolis Kansas City Los Angeles San Francisco Omaha Seattle Detroit
Montreal • RICHARDS-WILCOX CANADIAN CO., LTD., LONDON, ONT. • Winnipeg

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER



Slideaside is used for one car garages by sliding the doors against one wall; or for two car garages by sliding the doors to both walls. Doors and hardware are inside where they last longer.

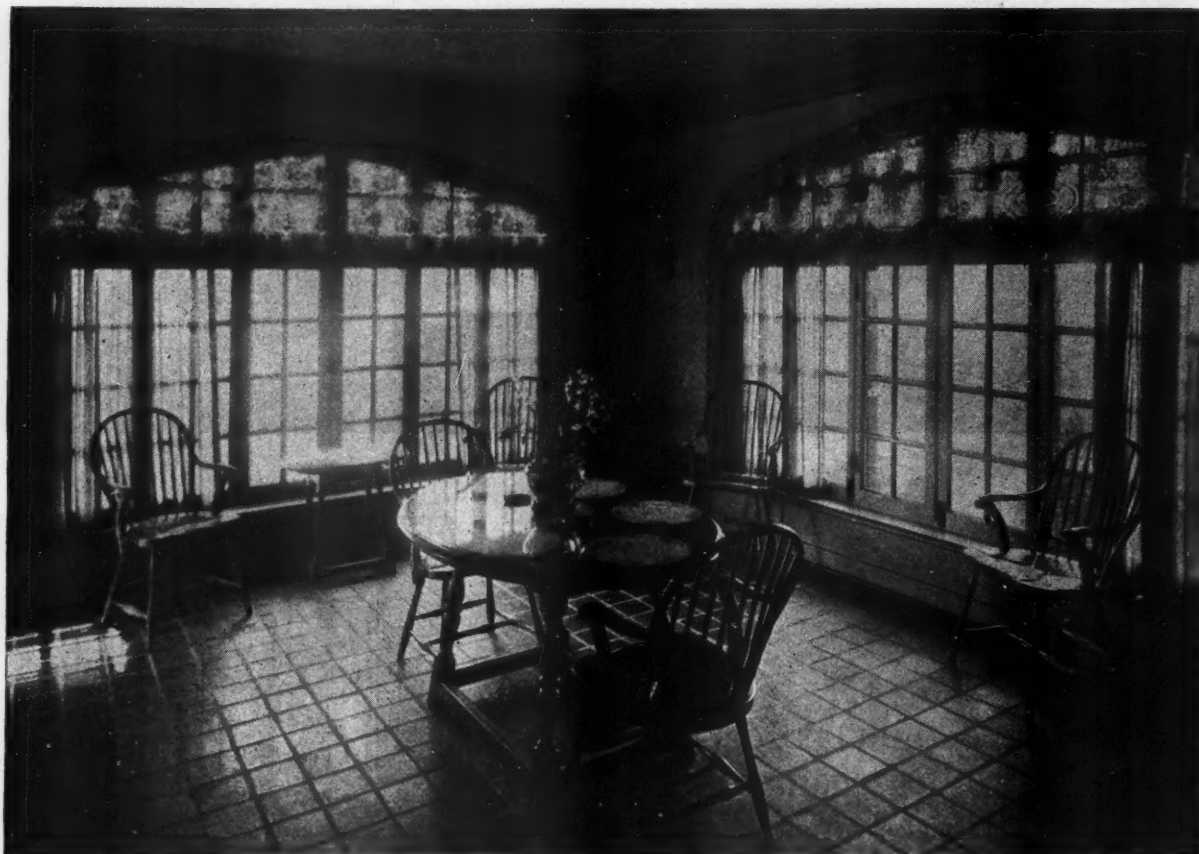


R-W Steel Folding Builder's Brackets are the strongest made, most easily attached and cost no more than a wooden bracket. They fold into a small package—easy to store away. Made in 3 and 4 foot lengths.

R-W Rapid Acting Vises are the easiest you ever saw to handle. A two piece cam operated nut of phosphor bronze allows instant adjustment at any point. One quarter turn of handle completely disengages jaws—permits sliding back and forth, full length of guide rod. Slight reverse turn of handle re-engages and locks firmly. Perfect alignment; no parts to break or wear.



Concrete First-Floors



A FIRESAFE concrete floor between basement and living rooms is something that appeals to the prospective home-buyer very forcibly. He is quick to see its advantages—greater firesafety for his home (a large proportion of residence fires start in the basement and sweep upward through joists and studding), stronger construction, freedom from shaking and sagging, minimum danger of plaster cracking.

A concrete floor may be surfaced with hardwood, tile, linoleum, carpet, or anything the owner wants. Many prefer to have the concrete unsurfaced — but finished smoothly (hard troweled) and perhaps tinted, and finally wax-polished.

Concrete floors are simple to build. There are several practical designs, one of which is illustrated on the opposite page. The builder who is ready to offer houses with concrete first-floors will find a new and profitable market.

Practical information sent on request.

Underneath the tile floor surface of this cheerful dining room there is a concrete slab, built somewhat like the one shown in the pictures on the opposite page.

PORTLAND CEMENT ASSOCIATION — Chicago

Help to Sell Small Homes!



1



2



3



4



5



6



7



8

1—Concrete foundations and footings ready for walls and columns.

2—Form work and shoring—notice how simple it was to put this in place.

3—Upper surface of wooden forms and joist soffits, ready for the "pans" and reinforcement.

4—Metal "pans" and reinforcing rods fastened in position, ready to place concrete.

5—Placing concrete for the floor slab.

6—Setting clamps in the concrete to hold the sleepers for the floor surface—this job is to have a hardwood finish.

7—Completed floor from below—forms removed.

8—General view of floor nearly completed.

CONCRETE FOR PERMANENCE and Firesafety

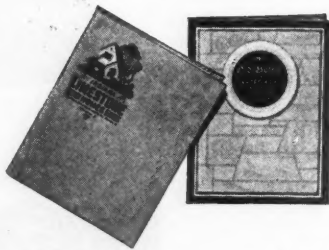
WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER



*Residence, Detroit, Michigan. Charles Valentine, Jr., Architect. Lawrence B. Keim, Builder.
Built of Sawed Indiana Limestone Random Ashlar, with cut-stone trim.*

Get the Facts about Sawed Indiana Limestone Facing

These free booklets tell you all about this new profit field in residence construction. Write for them now. Use coupon.



CONTRACTORS the country over are now starting to build houses of Indiana Limestone. Have you heard about this new development in building? If not, send for full information now. It may mean dollars for you this spring.

Indiana Limestone is the beautiful, light-colored, natural stone of which big buildings in New York,

Chicago and all principal cities are constructed. New ways of preparing, handling and using this stone now make it entirely practical for everyday residence construction also. The result is a house incomparably more beautiful, yet the cost is only 5% to 6% greater. Stone

requires no upkeep expense. It grows more attractive with age.

Indiana Limestone Random Ashlar is used as a veneer over stud frame or as a facing for hollow tile, just as brick, stucco or wood is used. We saw the stone into strips four inches thick and of various heights right at the quarries. Then it is shipped all

INDIANA LIMESTONE COMPANY, General Offices:

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE

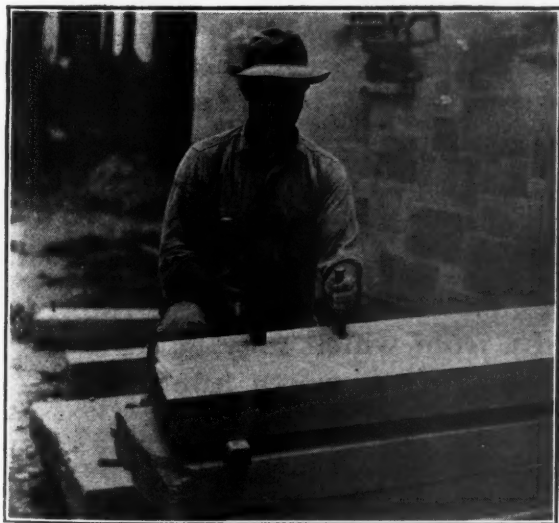
We are telling the public about this new way of using stone. Shown here is an advertisement appearing in *House & Garden* and *House Beautiful*. Why not become the authority on Indiana Limestone construction in your community? →

over the country. On the building site the stone is broken and jointed with the aid of an electric saw or with ordinary hand saw ready for laying up in the wall. Stonemasons or bricklayers do the laying up. The more expensive cut stone may be eliminated entirely or used only for trim. No carefully prepared drawings are necessary.

Since we have been telling contractors in these pages of this new method of using Indiana Limestone, thousands have written us for full information. They realize the profit opportunities that this new form of facing material presents. Every prospective house builder thinks

of natural stone as the finest possible building material. This new way of using it now makes it possible for him to have a natural stone house at a cost only 5% to 6% greater than if some less desirable material were used.

Why not write at once for our literature and learn the full story? Here is the sort of proposition you may be looking for. One that will help to put you out of the realm of ordinary competition. Let us tell you all about it. Just fill in, clip and mail the coupon today.



A shallow groove, little more than a scratch, is all that is necessary in breaking the strips of Indiana Limestone into lengths. Then a few taps on the opposite side breaks the stone cleanly along the line of the groove.

House & Garden March 1929

This new way of using Stone

Reduces cost... makes Indiana Limestone practicable for any sort of residence construction. Write for full information.

INDIANA Limestone is the stone just now in modern office buildings... the most durable and elegant structure. Now a new method of preparing, handling, and using this beautiful natural building material makes it entirely practicable also for moderate cost residences.

For only 5% to 6% more, you can build of Indiana Limestone and have a home far beyond the ordinary in beauty, permanence, fire safety and resale value.

Indiana Limestone is used both as a facing over brick or hollow tile, or as a veneer over wood-steel frame. The stone is saved by one quarter after strips four inches thick. These are shipped to the building site. There the mason's helper or ordinary hand-saw breaks them into lengths. The stone facing is then built up either by stonemasons or bricklayers.

This photograph shows how Indiana Limestone is now used as a stone facing. The new method shows the stone in strips.

The more expensive cut stone is used for trim only. Or it may be omitted entirely. No carefully prepared drawings are necessary. Our free booklet will show you.

INDIANA LIMESTONE COMPANY General Office: Bedford, Indiana Branch Office: Tribune Tower, Chicago

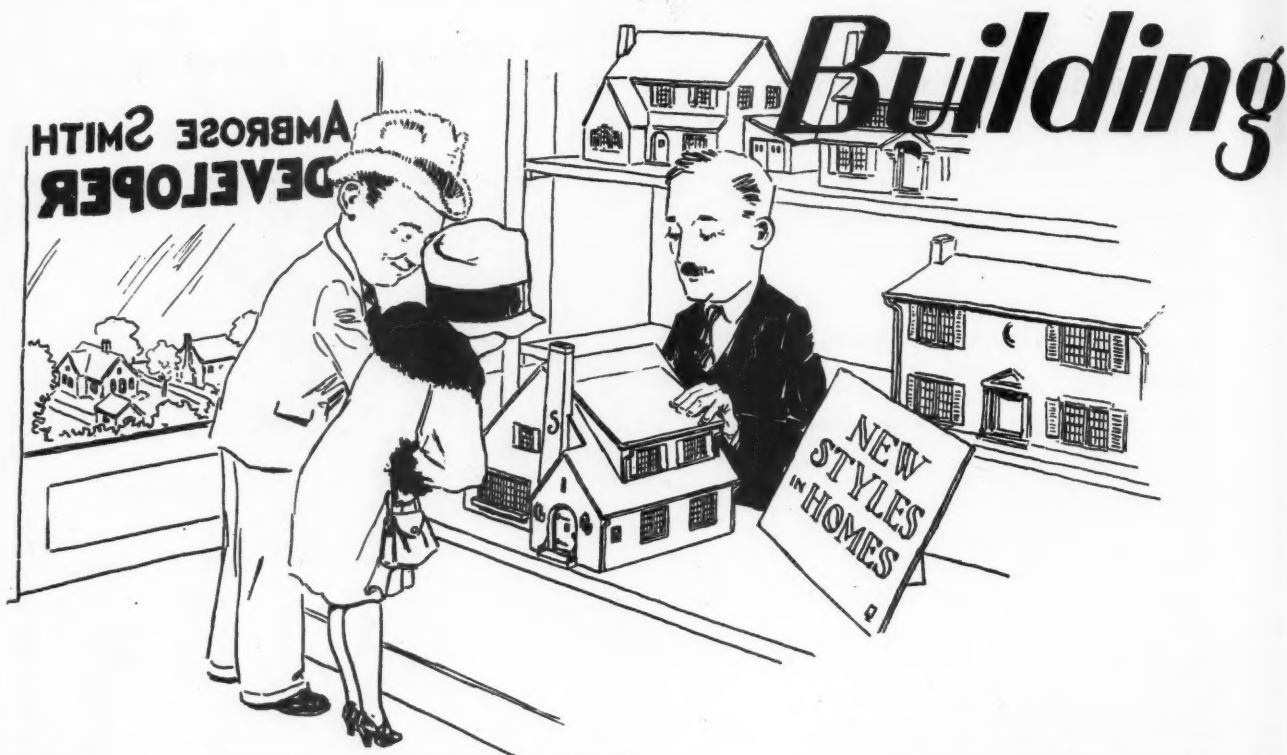
Examples of houses built this way. Many interesting variations in the use of stone in this manner are possible.

Write for booklet. We'll gladly send you full information about the use of Indiana Limestone Random Ashlar for residences. Just ask for our booklet on the conversion coupon below.

Box 757, Service Bureau, Indiana Limestone Company, Bedford, Ind. Please send booklet and complete information about Indiana Limestone Random Ashlar for residences.

Name.....
Street.....
City..... State.....

Bedford, Indiana Executive Offices: Tribune Tower, Chicago



The GENTLEMAN in the DARK SUIT ... is a Speculative Building Specialist, or Building Developer

He and a mere handful of other Developers are lucratively engaged in doing 65% of the nation's yearly \$2,000,000,000 residential building!

The Building Contractor is preeminently eligible to become a Developer, for by training and experience he knows how to build the best possible homes for the money.

So far, excellent—but he must also know how to finance a development, lay out the grounds, subdivide, landscape and most important of all, he must be up-to-date on advertising and selling ideas that will *SELL* his homes.

Information on all this and more is given in the monthly issues of **BUILDING DEVELOPER** in practical articles by experts on these subjects.

Also, each issue contains the complete story of one or more exceptionally successful developments from which may be learned the methods of the leaders in the field—ideas worth hundreds of dollars—for two dollars a year.

The monthly visits of **BUILDING DEVELOPER** will form a most valuable companion magazine to your **AMERICAN BUILDER** as it will give you the ideas that others have used in successful home selling.

BUILDING DEVELOPER, 120 West 42nd St., New York

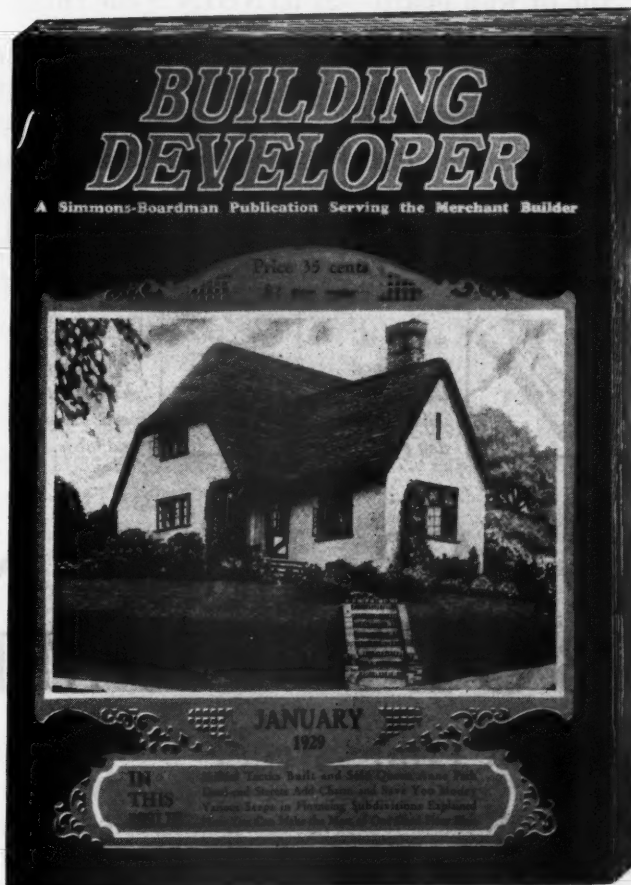
HOMES for SALE?

Then Building Developer Is Your Magazine

Read by 15,000 like the "Gentleman in the Dark Suit"

CONTENTS:

Planning
Engineering
Financing
Subdividing
Field Office
Designs
Entrance Gates
Landscaping
The Latest in
Construction Methods
Plans of Homes
That Sell
Each Issue
Contains Complete
Working Plans of
Front Cover Home



CONTENTS:

Practical Ideas
for Sales and
Advertising
Campaigns
How to Stage "Model
Home" Exhibits
How to Interest
Prospects
Remodeling Ideas
Apartment Plans
Interiors
Handling Salesmen
Making the most
of Modern Materials
and Accessories

One Year's Subscription \$2, Use this Coupon

BUILDING DEVELOPER
120 West 42nd Street, New York

DATE.....

I am doing Speculative Building so send me BUILDING DEVELOPER for One Year for \$2.—enclosed (3 years for \$5. If you wish.)

Fill out if you please

IN 1928 I BUILT
FOR RE-SALE.....HOMES
IN 1929 I EXPECT TO
BUILD FOR SALE.....HOMES

Name.....Address.....

City.....State.....

99 ⁴⁴/₁₀₀ SURE

WHAT you want to do and what to do it with are two questions instantly answered by a SEBCO selection.

If it's masonry, brick, concrete, stone, gypsum block or hollow tile you can use a DRYVIN, SCRUIIN, TAMPIN or LOXIN, depending on the purpose of the job; wherever you need a toggle bolt, whether for use on plaster, metal lath, gypsum block, hollow tile or wall board—SPRINGIN'S the thing.

These are the SEBCO 5-point Star leaders that meet the requirements of every job: SPRINGIN—the toggle with resilient wings; SCRUIIN—the lead anchor that never fails; DRYVIN—the expansion shield you hammer home; TAMPIN—the machine screw anchor set in place with tamping tool; and LOXIN—the all-steel, hot-galvanized machine bolt shield that locks in place.



LOXIN, the super-expansion unit for unusual loads.



TAMPIN, the machine bolt shield for shallow holes.



SCRUIIN, the improved lead anchor with the bull-dog grip.



DRYVIN, the expansion shield that saves time and labor.



SPRINGIN, the new and better toggle bolt with no springs.

STAR EXPANSION BOLT COMPANY

143 Cedar Street • New York

A full stock is carried at these branches:

NEW YORK
DETROIT

PHILADELPHIA
SAN FRANCISCO
CLEVELAND

BOSTON
SEATTLE
CHICAGO

ATLANTA
LOS ANGELES
ST. LOUIS

Do something for me, will you? Let me know what free samples you want. When they come, look 'em over and you'll agree with me that for sure work "stick to SEBCO."

Ole Ben Bolt

FOR FREE SAMPLES and STUFFERS
mail this coupon



Ole Ben Bolt, STAR EXPANSION BOLT CO.
143 Cedar Street, New York

Send me free the items checked.

SPRINGIN ☐ Stuffers
☐ Samples
SCRUIIN ☐ Stuffers
☐ Samples

[Be sure to state quantities desired]

DRYVIN ☐ Stuffers
☐ Samples
TAMPIN ☐ Stuffers
☐ Samples
LOXIN ☐ Stuffers
☐ Samples

Name _____
Address _____
City _____ State _____

Making Money

isn't the only job the CLARKE Portable Sander does for Contractors

A sanding machine that you carry to the job in one hand and surface 800 to 2,000 square feet of floor in 8 hours—running it from a light socket—is going to **make you money**. No question—the Clarke licks the transportation difficulty—the special power line trouble—everything that has made you hesitate about doing your own sanding.

But that's only *one* reason so many contractors lately have started using Clarke Vacuum Portable Sanders.

More important, the Clarke does a job that makes yours the smoothest, most velvety floors your customers ever saw. Perfect floors sell houses! They back up your reputation for good building. And with the Clarke they actually cost you less than you're now paying for floor surfacing.

No "Horsefeathers" About These Claims

The Clarke weighs but 31 pounds. It's got the speed—it's got fast cutting power—it's got the quality and performance that **ONLY** a Clarke can give you. Plug it into any light

socket—snap the switch—and do it almost as easy as with a vacuum cleaner. Any good man can start out with a big footage the first day. And your only cost is a little sandpaper, for the machine is built like the Rock of Gibraltar.

Try and Match This Written Guarantee

And remember the Clarke is the only sander made that's backed by a definite, written guarantee of performance.

It's *got* to do for you what Clarke says it will! You receive our written guarantee—the pledge of the company that originated portable sanding equipment and has pioneered in their manufacture ever since.

Get the **FACTS**. Mail the coupon. Tear it out *now* and send it in *today*.

Clarke Sanding Machine Co.
Dept. A-33
3815 Cortland St., Chicago, Ill.

MAIL THIS COUPON

<small>SAFER - FAST CUTTING</small> CLARKE <small>VACUUM PORTABLE SANDER</small> <small>TRADE MARK</small>	
CLARKE SANDING MACHINE CO. Dept. A-33, 3815 Cortland St., Chicago, Ill.	
Without obligation, kindly send me the money making facts about the CLARKE VACUUM PORTABLE SANDER .	
Name	
Address	
City	State



BLACK & DECKER

PORTABLE ELECTRIC HAMMERS

"With the Pistol Grip and Trigger Switch"

No. 2 Electric Hammer

Capacity: Up to 5/8" holes in brick or concrete

Weighs only 10 pounds, 16 5/8" long, 3,300 blows per minute. Complete in fibre carrying case with No. 0 chuck and turning wrench, 5/8" star drill and drift key.

Price \$145.00

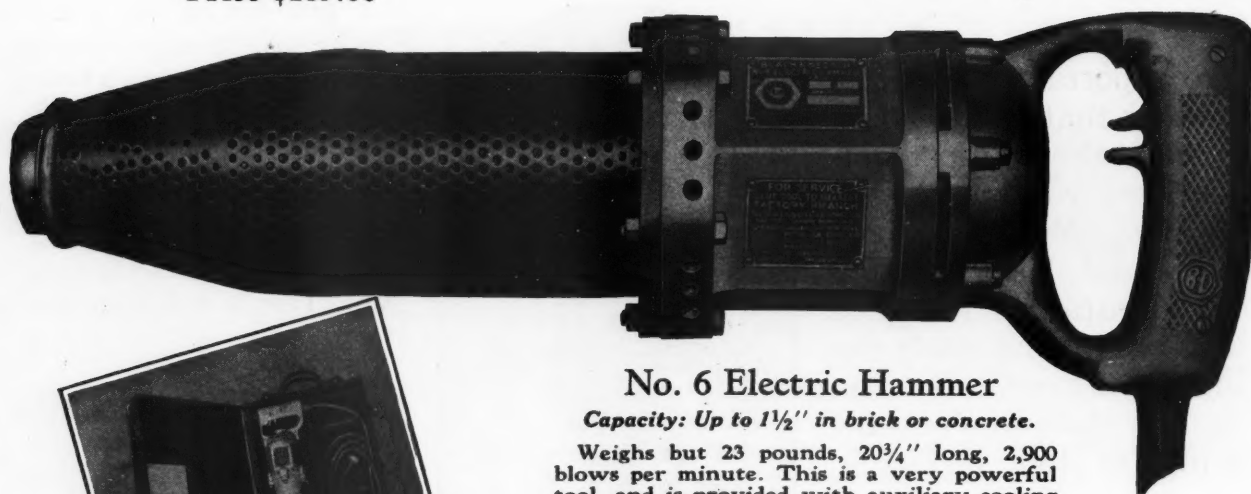


No. 4 Electric Hammer

Capacity: Up to 1 1/8" in brick or concrete.

Weighs only 15 1/2 pounds, 18 5/8" long, 2,300 blows per minute. Complete in fibre carrying case with one each No. 1 and 2 chuck and turning wrench, 1" star drill and drift key.

Price \$185.00

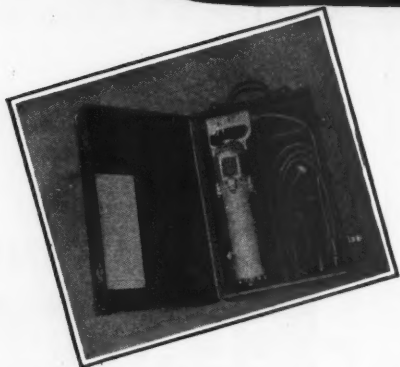


No. 6 Electric Hammer

Capacity: Up to 1 1/2" in brick or concrete.

Weighs but 23 pounds, 20 3/4" long, 2,900 blows per minute. This is a very powerful tool, and is provided with auxiliary cooling barrel. Packed in fibre carrying case with one each No. 2 and 3 chucks and turning wrenches, 1 1/2" star drill and drift key.

Price \$245.00



THESE HAMMERS ARE POWERED WITH UNIVERSAL MOTORS AND CAN BE OPERATED ON DIRECT OR ALTERNATING CURRENT AT WILL. NO AUXILIARY APPARATUS—MERELY PLUG THE CORD INTO THE NEAREST ELECTRIC LIGHT SOCKET AND "PULL THE TRIGGER."

Write for details of our Time Payment Plan

THE BLACK & DECKER MFG. CO.
TOWSON, MARYLAND

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE



This Simple Act Meant a \$100,000 Business for Frauenfelder of St. Louis

Four years ago Edward Frauenfelder of St. Louis investigated Duntile. Today he owns a \$100,000 manufacturing business. In a letter dated January 26, 1929, he says, "Among our large orders were 70,000 units for one subdivision, another for 125,000 units and 40,000 units for a group of industrial buildings. Our sales went over \$100,000 for the year 1928. Prospects for 1929 look exceptionally good and we confidently expect to pass our record for 1928."

From All Walks of Life

Men from all walks of life have achieved similar successes in Duntile. The facts are clear for all who think enough of their own future to investigate as Frauenfelder did.

The Kansas City Duntile plant has multiplied the original investment thirty-three times. In Altoona, Pa., two brothers refused \$100,000 for their business. In Montreal, whole blocks of buildings are of Duntile construction. The biggest garage in Canada is included! One Duntile manufacturer reports that his products displaced a half million dollars' worth of other types of construction last year. A Pennsylvania plant has done \$90,000 worth of business with one customer, a large oil company. In 1928 Duntile plants consumed 785,992 barrels of cement—an increase of 30% over 1927. So the records read—in plain, straightforward facts.

A Non-Competitive Business

Duntile is an exclusive trade-marked building unit. A franchise is granted every manufacturer. With Duntile, high-grade masonry construction can be produced at the cost of good frame. Duntile is adapted to every type of building from garage to skyscraper—and for every part of a building from cellar to roof. It is produced in a color range no other masonry material can duplicate—bar none. It has gone into millions of dollars worth of actual construction from coast to coast.

More sources of supply for Duntile are needed. Act at once and arrange to manufacture it for your locality. Moderate capital will start you. Duntile can mean for you, as for Frauenfelder and many others, the stepping stone to manufacturing independence. But act at once, before someone else secures the opportunity for your vicinity.

W. E. DUNN MFG. CO.

415 W. 23rd Street
HOLLAND, MICH.

**Some Men
Are Blind to
Opportunity
ARE YOU?**



**HERE IS YOUR
CHANCE
TO FIND OUT**

W. E. DUNN MFG. CO.
415 West 23rd Street
Holland, Mich.

Show me through your book "Basic Facts" how I can win manufacturing independence by supplying Duntile in my community as Frauenfelder and others have done. Show me how I can manufacture Duntile in a plant of my own at a profit of 30 to 60 per cent.
Show me how I can build permanent masonry walls at the cost of frame and make more money for myself.

NAME.....
ADDRESS.....

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

Widen Your Market



Residence, St. Louis County, Mo. Architect and Contractor: J. C. Hamilton; Plasterer: W. M. Small

... any building
budget permits
the use of

ARCH LATH

No need to pick prospects for this finer plaster base. All builders are entitled to the superlative advantages which are now increased by the use of COP-R-LOY, the Copper Alloyed Sheet Steel, in the making of Arch Lath.

The distinctive design which saves labor and material; the ideal stiffness which makes possible the best in plastering for the walls and ceilings of the humble as well as the pretentious homes and other structures, — these have opened new markets for Arch Lath distributors.

Now Arch Lath is provided in the modern nationally known Copper Alloyed Sheet

Steel, COP-R-LOY, which means a still greater demand. Arch Lath is universal in its adaptability. Send for a sample for inspection.

WHEELING CORRUGATING COMPANY
WHEELING, WEST VIRGINIA

Branches:

New York Buffalo Philadelphia Chicago Kansas City
St. Louis Richmond Chattanooga Minneapolis
Des Moines Columbus, Ohio

COP-R-LOY

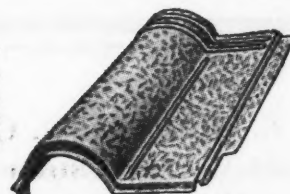
Reg. U. S. Pat. Off.

THE COPPER ALLOYED SHEET STEEL



Wheeling Sheet Steel

Building Materials such as Spanish Metal Tile, Roofing Ternes, Diamond Lath, Corner Bead, Picture Mold, Base Screed, Wall Ties and other essentials are now available in the better and more durable steel, COP-R-LOY

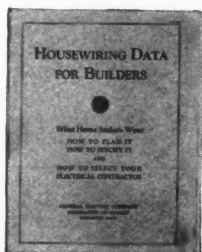




A big factor in selling a house

THE home buyer's opinion as to whether a house is a good buy or a poor one is largely dependent upon the impression created by a few outstanding items.

Write to section W-123 for an important little booklet, "Housewiring Data for Builders."



Whether or not these items appear attractive to the prospect is dependent upon the opinion he has formed as to what is desirable in household equipment.

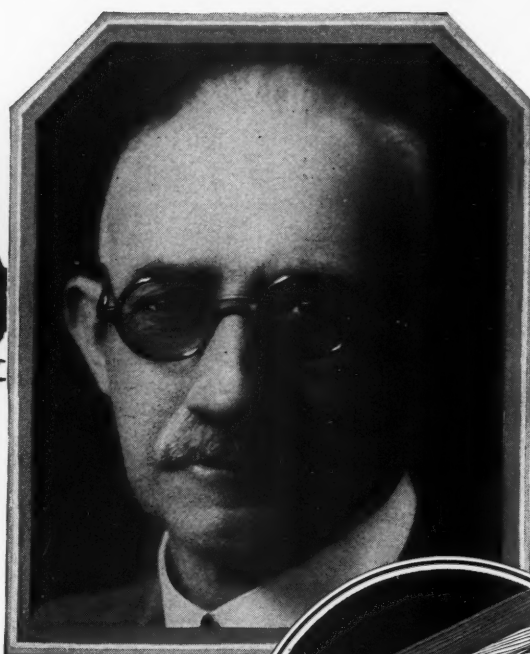
Nationally advertised products stand foremost in creating this desirable impression. The General Electric Wiring System is the only nationally advertised wiring installation. By adopting it and featuring it as standard equipment, you add a big factor to the reasons why a *prospect* should become a *buyer*.

GENERAL ELECTRIC WIRING SYSTEM

MERCHANDISE DEPARTMENT • GENERAL ELECTRIC COMPANY • BRIDGEPORT, CONNECTICUT



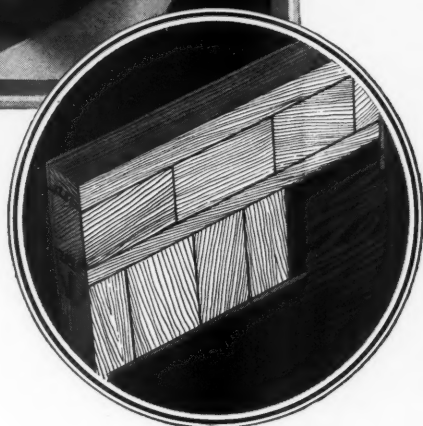
In this apartment house for F. W. Bengt, Laminex doors have proved very satisfactory, writes J. H. Angel



J. H. Angel, Salt Lake City general contractor, is enthusiastic about a door that he found will not swell or shrink or warp

Do you grumble about fixing doors?

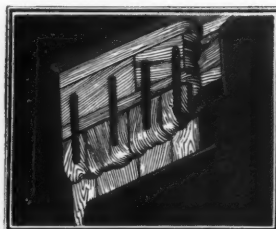
Read why this man doesn't



The Laminex stile is built of separate core blocks with crossed grains. Any tendency of the one to shrink or swell is counteracted by an opposing tendency of its neighbor. Blocks are locked together and dovetailed to full-length edge braces with water-proof Laminex cement.

EVERY once in a while you get a call—sometimes from the owner of a brand new house. "Doors are sticking!"

You send a man out to plane down—sometimes to replace one of the doors—*at your own expense!* Every contractor has experienced it.



Oversize (3/8") dowels — and one more than is used in the average door. The sections are welded with Laminex cement under tremendous pressure

James H. Angel of Salt Lake City says "My time is mostly spent looking after items that have proven unsatisfactory and selecting future items that will be void of trouble.

"In the latter class," the trouble-proof class, "I place Laminex doors," he says. For Mr. Angel has found that Salt Lake City's high dry altitude can no more cause a Laminex door to shrink or warp or swell than can sea level climates. They are absolutely trouble-proof.



3-ply panels with grains crossed and water-proof cemented. They won't buckle or blister. And there's no danger of pitch breaking out!

When you specify Laminex doors you do yourself and the owner, too, a favor. You avoid costly returns to service faulty doors. He

avoids the annoyance. And all it costs him is three or four dollars more for all the Laminex doors in a six-room house.

The sketches here show how a Laminex door is built; why it can't swell or warp; why it won't loosen up. For further details, and information about the new beautiful Philippine Laminex doors and carton trim, clip the coupon today. We will tell you, too, *who* can sell you Laminex.

THE WHEELER, OSGOOD COMPANY,
Dept. E-39, Tacoma, Washington.

Please tell me more about trouble-proof Laminex doors and where I can get them.

Name.....

Address.....

City.....State.....

LAMINEX DOORS

Will not swell, shrink, or warp

The Master

30% Faster



The Pick of All One-Baggers

JOB tested and job proven. The kind of mixer you can depend on to place a maximum amount of concrete per day. It "eats up" that dry, sticky mix now specified on many jobs.

The *Marsh-Capron Master 7*—is the *Only Fully Modernized One Bagger Made*. Built to stand up and take it. Compact—rigid as a steel bridge yet light enough so men can easily handle it. Speed in mixing—speed in moving from job to job. 30% faster, any way you look at it. Compare it on features, quality, performance, price—and it's the pick of all One Baggers.

Get your Bulletin on this new Marsh-Capron

LOOK OVER THESE IMPROVEMENTS—

Timken Equipped
All models spring mounted with roller bearing wheels.
Rubber-tired and steel wheels interchangeable.
Diamond Roller Chain Drive
—Fully enclosed Running in Oil.
Marsh-Capron Rail Track
Guaranteed for life of Mixer.
Wonder Quick Water Tank—
fast, accurate, easy operating.

Construction Machinery Company

103 Vinton St., Waterloo, Ia.

Makers of Wonder Tilting Mixers; Marsh-Capron Drum Type Mixers; C. M. C. Hoists; Kern Hoists; Mechanical Hoeman Plaster Mixers; Power Sawyers.
Plants at Waterloo and Chicago Heights, Ill.

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

Above all~
A Lasting Roof

**AMBLER
ASBESTOS
SHINGLES**

Wear~Proof~Fire Proof~Artistic

What more can you ask?

**ASBESTOS
SHINGLE, SLATE & SHEATHING**

COMPANY

**Factories: AMBLER, PA.
ST. LOUIS, MO.**

Branches in Principal Cities

**Made in
3 styles and
7 colors**

***This is
"English Thatch"***

***Send for
free Booklet***

"CAN YOU ANSWER THESE QUESTIONS ON INSTALLING BRASS PIPE?"

Brass is softer than steel and works easier. But it must be installed right, with right tools and dies, and by the *right* methods. Brass pipe joints won't rust shut. They have to be made right to begin with.

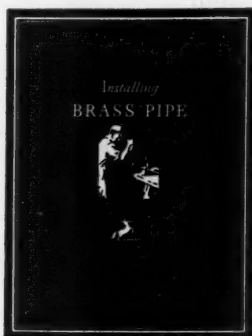
CAN YOU ANSWER THESE QUESTIONS?

1. *What is the best way to cut brass pipe?*
2. *What is the easiest way to bend it?*
3. *How much does reaming increase the water flow?*
4. *What are the best dies to use?*
5. *Is it necessary to use a lubricant in threading?*
6. *Should a thread project beyond the fitting?*
7. *Should wicking be used?*
8. *What is the best wrench to use with brass pipe?*
9. *Does brass expand and contract more than steel?*
10. *Can you allow for expansion accurately?*



*The Mark that Identifies Good
Brass and Copper Products.*

If you are not *sure* of the answers to all these questions, then you will be interested in our new book "Installing Brass Pipe"—FREE to you—without obligations. It's short, clear, and definite, large type, 51 photographs, blue prints and drawings—a review of the best practices of good plumbers, free. Just send off the coupon below while you think of it and we'll mail the book to you.



FREE

A review of the best ways
to install brass pipe—30
pages, 51 illustrations.

Chase Brass & Copper Co.
Waterbury, Conn.

Dear Sirs:

Please send that new book of yours "Installing Brass Pipe". I understand it's free with no obligations.

NAME _____
(Please write clearly)

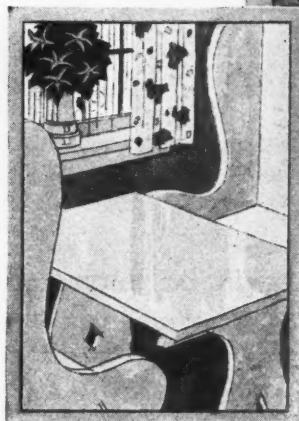
STREET _____

CITY _____ STATE _____

CHASE BRASS AND COPPER CO.
INCORPORATED

WATERBURY . . . CONNECTICUT

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER



A bright, sunny breakfast nook—there's a place to start the day! Interior trim of Pondosa Pine always stays snug and trim looking, too.



Excellent for all inside work, Pondosa is a particularly happy choice for built-in features, such as a cozy little window seat.

Why should I use Pondosa Pine?

Because it is easy to work with

Pondosa Pine saves time in construction and that means money. Carefully milled, rigidly graded, and thoroughly seasoned, it is ready for the saw and hammer the minute it arrives on the job. Pondosa Pine takes a clean mortise. It does not split readily, causing waste of material, botchy jobs or time-out for remakes. Pondosa takes paint and varnish quickly and beautifully. The grain stays flat and ages without raising.

Use Pondosa where a dependable soft wood is required and know the satisfaction of a quick-going, profitable job and pleased clients.

Lumber dealers everywhere carry Pondosa—"The Pick o' the Pines"—it is trade-marked for identification and your protection with the Pondosa brand.

Western Pine Manufacturers Association, Portland, Oregon.

Pondosa Pine

The Pick o' the Pines



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JAEGER
DISC
WHEEL

ROLLER
BEARING

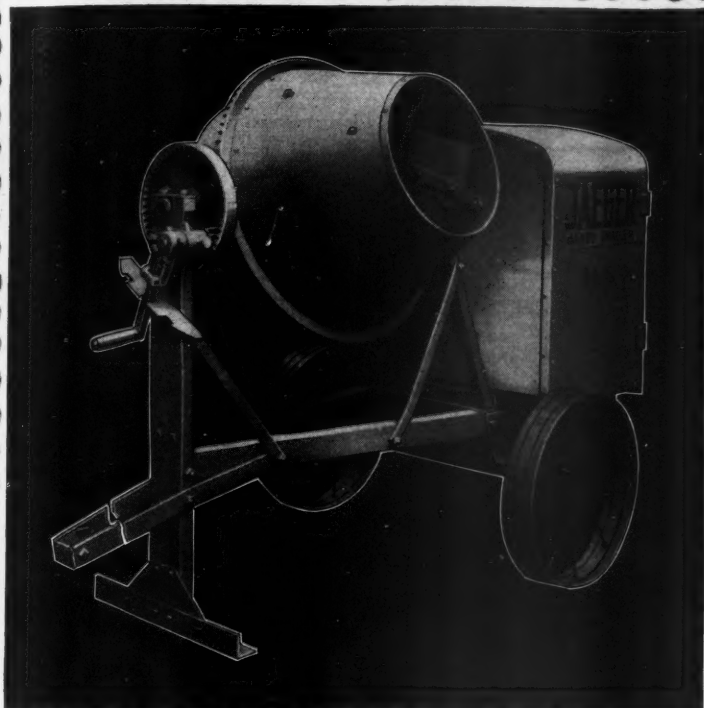
RUBBER
TIRES



Here It is for \$169

NET CASH
F.O.B. COLUMBUS

JAEGER'S HANDY HALF-BAG TRAILER



(only \$179.50 with Rubber Tires)

Look the whole market over and you won't find another "buy" like this one — a 3½S all purpose mixer, all-steel with roller bearing wheels, Jaeger built and Jaeger serviced for a long and profitable life!

Has fast mixing "Flat-Spot" Drum with 5 second discharge, good for 35 cu. yds. a day. The power is a 2 h. p. F. & J. engine with Wico magneto—fully housed.

Nicely balanced. One man handles it, any car trails it. Choice of steel or rubber-tired disc wheels, all roller bearing.

It takes the biggest mixer company in the business to put out the "Handy" Trailer at this bed-rock price. Send for Jaeger price list and catalog, all sizes up to 28 ft. Save time and use the coupon, today!



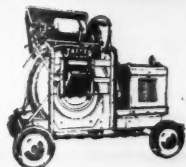
ANY CAR
TRAILS IT



Well Balanced—
A Man Can Lift It

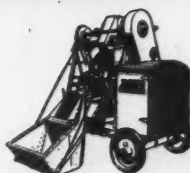
Husky
2 h. p.
Engine

JAEGER



NON-TILTERS
Up to 28 ft. Sizes

TILTERS
with loaders, 3½, 5, 7,
10, 14 ft.

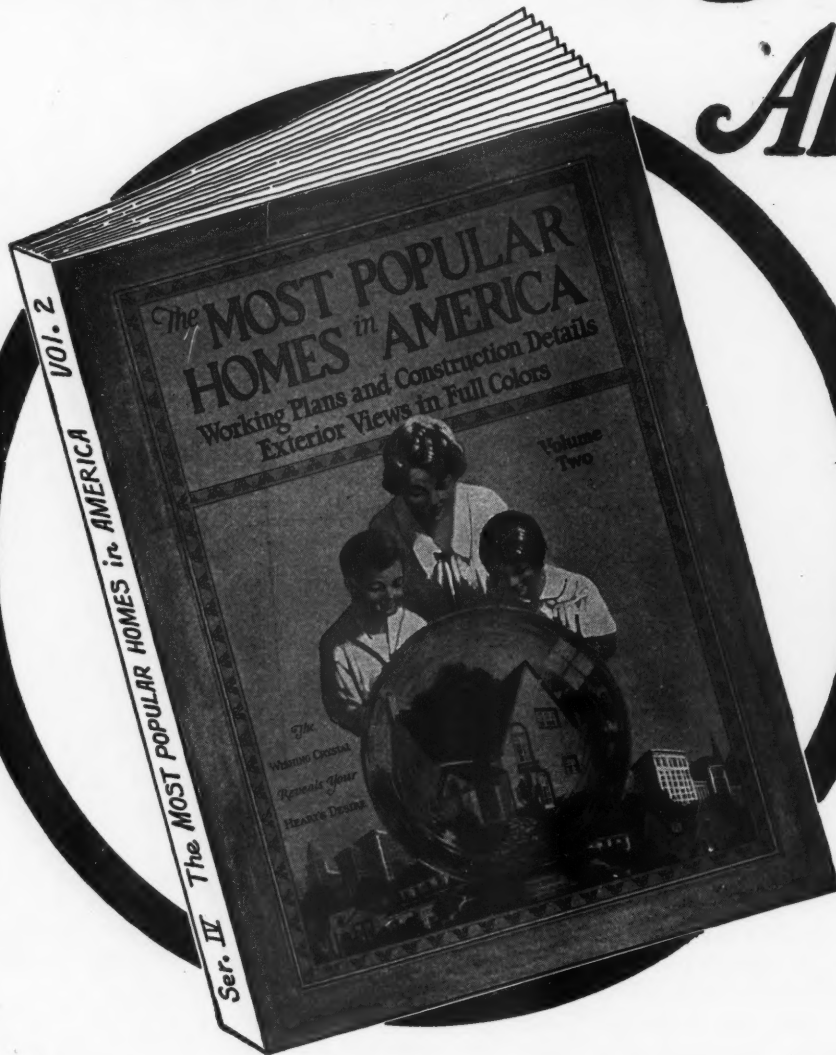


THE JAEGER MACHINE CO.,
521 Dublin Avenue, COLUMBUS, OHIO
Please send catalog, prices and terms on
Mixers ☐ Plaster Mixer ☐ Tilling Mixers
Name _____ Address _____ City _____ State _____
Date _____

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You Get This Big New Book

Absolutely Free!



"Most Popular Homes In America"—VOLUME TWO

is a companion book to *Volume One*, which has had a phenomenal sale in the past year. *Volume One* has been repeatedly called the most beautiful and useful home design book ever printed.

The new book, "*Volume Two*", is even more beautiful in appearance and contains 20 more full color plates than *Volume One*. If you already have *Volume One*, you will certainly be delighted with *Volume Two*.

We have on hand only a limited number of this new book—they are going rapidly. If you want yours, send for it now, *today*, before the supply is exhausted.

15 Sets of Complete Building Plans

FIFTEEN of the home designs in this wonderful book have complete working drawings, scale one-eighth inch and larger. You can build direct from these drawings, thus giving you an architectural service worth a neat sum of money, yet we include them in this wonderful book and send it to you absolutely free of cost.

These working drawings are only one of the many valuable features of this remarkable book. In addition, there are *Twenty Pages* of designs printed in four colors. Many pages of high-class half-tones reproduce actual photographs of beautiful interiors, furnishings, modern home conveniences, etc., etc.

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ADDRESS.....		
POST OFFICE.....STATE.....		
My occupation is (Check Only One)		
<input type="checkbox"/> Dealer	<input type="checkbox"/> Builder	<input type="checkbox"/> Architect
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PROFIT\$ IN EVERY MODEL

Here are shown **FOUR** reasons why successful contractors and builders are lowering construction costs on their jobs. Why do they prefer **SKILSAW**? Because, these **FOUR** models are the greatest time savers in sawing, known to keen-minded builders. There are **PROFITS IN EVERY MODEL!**

SKILSAW serves every purpose in sawing.

Model "J" [weight, 10 lbs.] is used for cutting form panels, stair stringers, sheathing, bridging, etc.

Model "E" [weight, 18 lbs.] has a tilting base for bevel cuts. It is designed for cutting concrete forms, rafters, joists, studdings, etc.

Model "O" [weight, 24 lbs.] also has an adjustable and tilting base; it is particularly adaptable for cutting all kinds of rafters for roofs of any pitch. Lintels, doors, heavy joists, shoring, etc., are speedily and accurately cut with this model. It quickly converts to a table saw.

Model "M" [weight, 28 lbs.] is appropriate for cutting timbers 4 x 4 or heavier.

These tools have "guts" for real work! They are simple, sturdy, easy to handle, easy to operate for straight, depth or bevel cuts. Only these and other **PRACTICAL** features are included in their design by the pioneers in the electric hand saw business.

See **SKILSAW** demonstrated before you buy any saw. No obligation. Just fill in the coupon below and mail it today.

Look for the trade name. These tools are manufactured only by

SKILSAW INC.

3822 RAVENSWOOD AVENUE, CHICAGO, ILLINOIS

Model "J"
Cuts 1 7/8" deep

Model "E"
Cuts 2 3/4" deep

Model "O"
Cuts 3 3/4" deep

Model "M"
Cuts 4 1/4" deep

I have checked the model I'm interested in. I'd like to see it demonstrated.

☐ Model J

☐ Model E

☐ Model O

☐ Model M

Name

Address

City State

No. 22

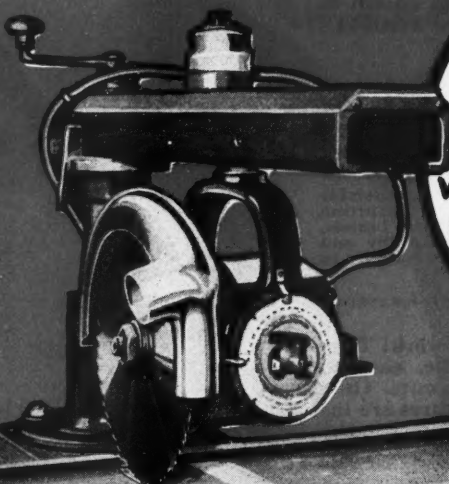
SKILSAW

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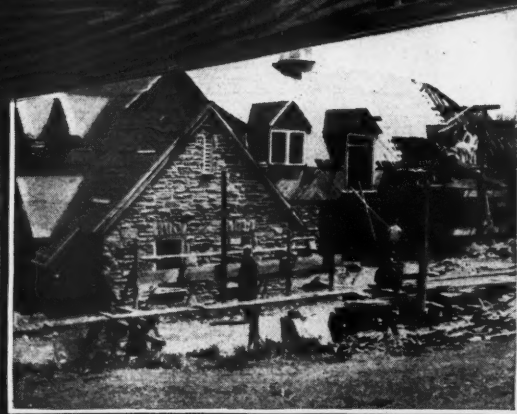
~ and now

\$195⁰⁰
F.O.B. LEOLA

Complete
with motor, table,
saw blade, safety
guard, switch
and connecting
cord



DEWALT
JUNIOR T



the "JUNIOR" DeWalt

Wonder Worker

The Economy Wood Worker

FIVE years ago we brought out the DeWalt Wonder Worker. Today, thousands of DeWalts in horsepower up to five, in use throughout the country, testify to their unqualified success.

And now, to meet the demand created for a smaller unit of the standard DeWalt Wonder Worker, we have perfected the new "Junior."

The "Junior" readily handles material up to two inches with all the ease, speed, accuracy and variety of cuts so characteristic of the more powerful DeWalt, rips, cross-cuts, bevels, miters, dados, gains, ploughs, rabbets, shapes, routs, tenons, grinds and bores.

A superior type of wood-working machine. Direct drive—no gears. Portable or stationary. Not necessary to change machine adjustment to change from cross-cut to rip. Conveniently located switch and adjustable guard. Adjustable to gauges. Dials correctly set to any position. Solidly built and free from vibration. Positive locking devices. In balanced alignment in any position. Motor arm column and base balance on the same line. The price given is the price complete. No extras necessary to operate the Junior Wonder Worker.

Mail the coupon to get complete particulars for use on the job or in the shop and ask for a practical demonstration of the "JUNIOR" DeWalt Wonder Worker.

DE WALT PRODUCTS CORPORATION

756 New Holland Avenue, Leola, Penna.

Factory Branches: Chicago, Detroit, Cleveland, Kansas City and Birmingham

Sales and Service in All Principal Cities

Also Makers of DeWalt Band Saws, Jointers and Mortisers

Specifications of the "JUNIOR" DeWalt

Standard with 12" saw.
Material clearance distance—3".
Cross-cut 14" material.

Motor: Universal
To suit any current.
In any specific voltage
Table: 29" x 50".

Weight, net equipped—237 lbs.
shipping —283 lbs.
Direct Drive.



DE WALT PRODUCTS CORP.
756 New Holland Avenue, Leola, Penna.
Please send me full particulars of the "JUNIOR"
DeWalt Wonder Worker.

Your name.....
Firm name.....
Address.....

*Bates bags
save material . . . time
. . . labor . . . and money*



This
Trade-Mark . . . *

for your protection and profit

FROM now on this trade-mark will be on every Multi-Wall Paper Bag made by the Bates Valve Bag Corporation.

It identifies the product of the *originators and largest makers* of Multi-Wall Paper Bags, which effect such important savings in the handling and storing of cement, plaster, gypsum and similar products.

Bates Multi-Wall Paper Bags are moisture-proof. They reduce losses of materials through bag breakage and sifting. They empty out clean . . . save space in storage . . . are cleaner and more convenient to handle and store . . . and eliminate all the petty annoyances and details connected with bag salvage and returns.

** Indicates product MADE ONLY by the Originators and Largest Makers of Multi-Wall Paper Bags*

BATES VALVE BAG CORPORATION • 35 EAST WACKER DRIVE, CHICAGO, ILL.

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE



Fig. 690—Four men can use this Variety Wood Worker at the same time. A Rip and Cut-Off Saw Bench, with Boring Attachment, Mortiser, and Jointer all in one. Send for Booklet No. 82.

No. 65—Variety Tilting Table Saw—with motor on arbor; with counter shaft. Each machine furnished with one saw, ripping gauge, and one cut-off gauge with reach rod and stop.

No. X-24—A revolutionary new machine. Tilting Arbor Saw Bench—Sturdy, compact, self-contained. Motor built in; saw completely guarded.

Monarch

HUSKY and HANDY

... and HOUNDS FOR WORK!

MONARCH machines will never object to continued hard usage! They are built for that very thing. Only tested and proved materials are used in their making. The men who build them are craftsmen long trained in precision. Every part is inspected and approved before it is used in a complete machine. Every machine is guaranteed.

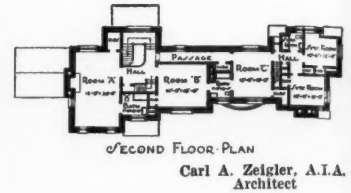
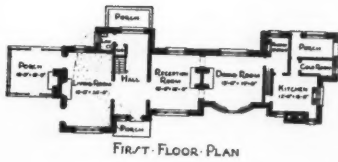
MONARCH machines are portable—they can easily be moved from job to job, an advantage which saves endless time and difficulty in the case of bulky materials.

MONARCH machines are well guarded. Your operators can work steadily without fear of injury.

They reduce labor to its minimum, and enable you to turn out the greatest possible amount of work at the least possible cost.

Write for descriptive circular and low prices

AMERICAN SAW MILL MACHINERY CO.
60 MAIN STREET HACKETTSTOWN, N. J.

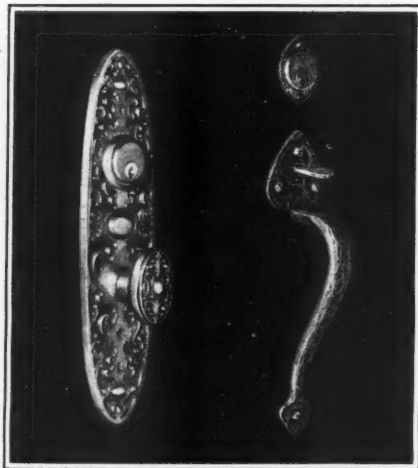


*Sargent Hardware designs
in harmony with the rambling English dwelling*

PROSPECTIVE BUYERS NOTICE EVERY DETAIL . . . THE BEST HARDWARE
IS MORE THAN WORTH ITS SLIGHTLY GREATER COST

THE homes you build must have a personal and distinctive touch. English, French, Spanish or Colonial—they must include what the buyers want. Every item of decoration and trim will be inspected and compared, even to the small but all-important details of finish.

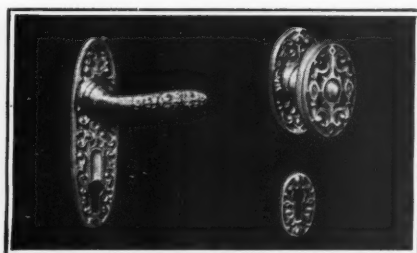
Here is where Sargent Hardware will help you. The best hardware adds to the value of every building. Hardware that is dependable, smooth-operating, and non-rusting, that will need no replacing while the building stands. Whatever your scheme of decoration, Sargent offers many designs



Escutcheon No. 7896ER with Knob No. 1913ER;
Door Handle No. HF2661.

ordinary hardware. By making a practice of installing it you will be repaid many times over in the assurance of permanent satisfaction it gives you and your customers. The cost of the complete finish hardware for this English type dwelling is only about 2% of the total building cost, varying somewhat in different sections of the country.

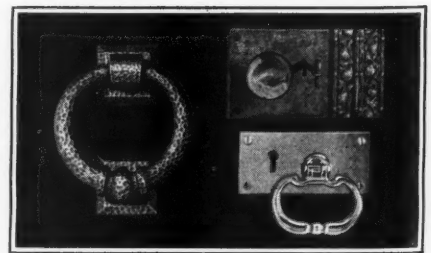
Our illustrated booklet, "Hardware for Utility and Ornamentation," will be sent you on request. You will find it interesting and instructive. Sargent & Company, 51 Water Street, New Haven, Connecticut.



Escutcheon No. 705ER with Lever Handle No. 1143ER; Door Knob No. 1912ER with Rose No. 265ER; Key Plate No. 870ER.

to choose from. Each an authentic reproduction or artistic adaptation. Sargent prescribes the hardware illustrated on this page for the English type residence pictured above. Each piece is beautifully finished, perfectly machined, and of solid brass or bronze.

Sargent Hardware is a worth-while investment, costing little more than

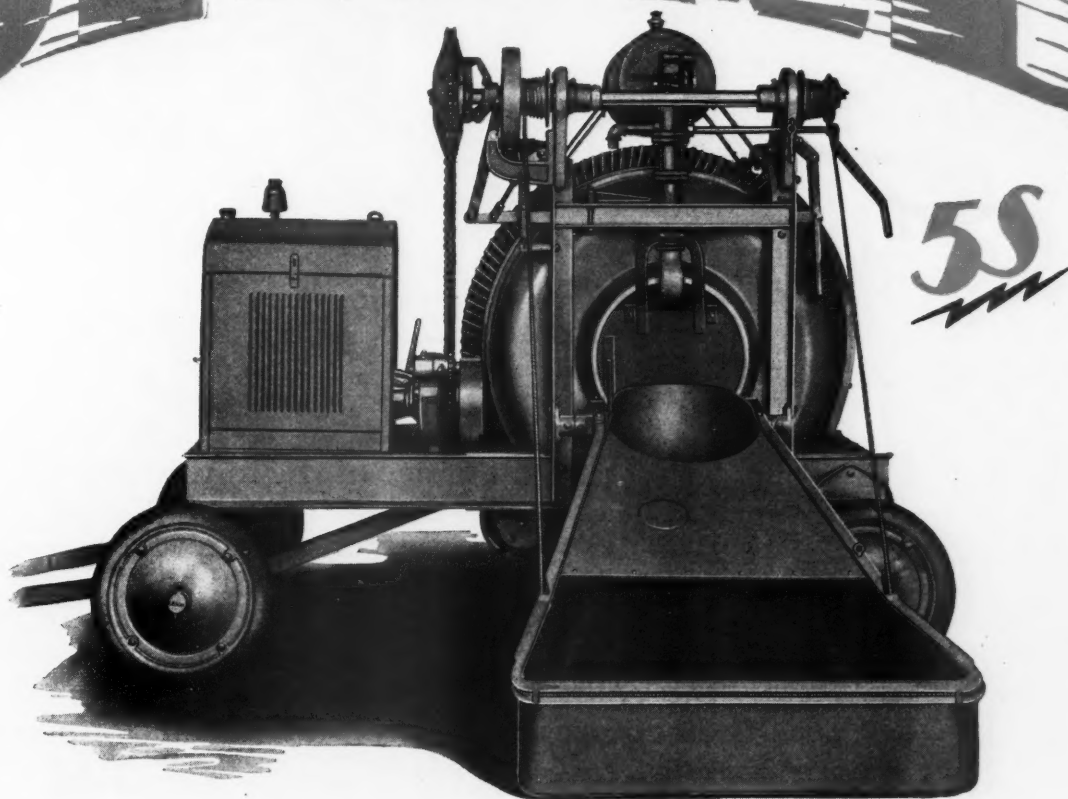


Door Knocker No. 43; Rim Lock No. HFEM3549; Knob and Ring Handle No. HFEM1065; Escutcheon No. HFEM560.

SARGENT
LOCKS & HARDWARE

FOR ADVERTISER'S INDEX SEE NEXT TO LAST PAGE

SPEED



In Getting Jobs Done...

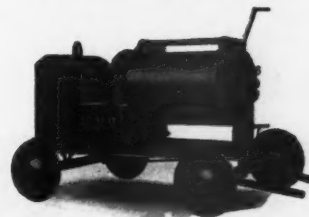
GETTING materials in and out of the drum faster---*speed in handling*---the Leach 5-S Mixer has this "knack". It gives you that extra daily yardage which is *profit to you*.

In its size and type, it is outstanding. Think of it—*all-steel construction, large drum openings, direct drive, no complicated jack shaft, clean charging skip, dependable power*.

Try the Leach 5-S—it's a winner—has *speed, capacity and longer life*. It's the "Hustler" of all Leach Orange-painted Mixers.

Send for a copy of our 5-S circular—It's yours for the asking.

The Leach Plaster and Mortar Mixer has all electric-welded steel frame—auxiliary drum clutch lever—self-aligning bearings—steel bar bag holder—can be had with hoisting outfit.



LEACH COMPANY
Oshkosh, Wisconsin

LEACH MIXERS

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

**Cut Out
the Danger of
Faded Joints!**



BRIXMENT *Prevents Fading of Colors!*

THE permanence of the mortar color in the joint depends not only upon the pigment selected but upon the mortar with which it is mixed. Too frequently a good job of brickwork is spoiled by the use of a mortar that fades the color or that leaves a white scum of efflorescence on the mortar joint.

When BRIXMENT mortar is used this condition is eliminated. For BRIXMENT contains none of the strong acids, alkalies or salts so frequently the cause of fading and of efflorescence in other mortars.

The small amount of mineral oil combined with BRIXMENT when manufactured is a further protection to the color because it prevents moisture from penetrating the mortar and leaching out the pigments. Handbook on request. Louisville Cement Co., Incorporated, Louisville, Kentucky.

District Sales Offices: 1610 Builders Building, Chicago; 301 Rose Building, Cleveland; 602 Murphy Building, Detroit; 101 Park Ave., New York

BRIXMENT

for Mortar and Stucco



FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE

AROUND *the* FAMILY TABLE



Home Financing the Big Problem *A Solution Proposed*

Editor AMERICAN BUILDER:

St. Louis, Mo.

The home builder, like any other merchant, is at all times confronted with the problem of financing his sales. The report of the letter from the Ohio builder published in the January issue of the AMERICAN BUILDER presents very forcibly the problem confronting the builder, financier, and buyer. From experience with home financing, I have found that it works to the advantage of all concerned to divide the financing into two steps. At the time of purchase, short term financing, and after the owner's equity has been increased, convert same into long term.

Mr. Brandt's "Certified Plan," outlined in the December issue, should be the goal for Home Buyer's original financing. At present this idea may be more readily accepted in some localities by placing such financing on a four year basis and at the end of four years transfer the balance due to a Building and Loan loan. With such an arrangement, the original financing of the property in question, would be arranged in this manner:

Same down payment as at present.....	\$ 495.00
Four year first mortgage.....	3,000.00
Monthly payment (four year second mortgage).....	1,500.00

Total (sale price).....	\$4,995.00
-------------------------	------------

Under this arrangement the monthly payments will be:	
Insurance, taxes and contingencies.....	\$12.50
Interest on first mortgage at 6 per cent.....	15.00
Payment on second mortgage (principal and interest at 6 per cent) 30.00	

Total	\$57.50
-------------	---------

A \$30.00 monthly payment on the second will cover interest and leave about \$290.00 due on the principal at the end of four years. Most Building and Loan Associations, with which I am familiar, will lend up to 70 per cent of their appraised value of a home. Assuming an appraisal of \$5,000.00 at the end of five years, a maximum loan of \$3,500.00 will be possible or more than enough to care for the maturing first and the balance due of \$290.00 on the second. From this point on, a monthly payment of about \$37.95 will cover interest on a \$3,300.00 Building and Loan loan and repay the debt in a little less than twelve years. This monthly payment is figured on the basis of \$11.50 per thousand, of which \$5.00 per thousand is used to build up a sinking fund to extinguish the debt. Under such an arrangement, the builder will be completely out of the financing at the end of four years. The home buyer will have his loan permanently financed at a slightly smaller monthly outlay than at the time of purchase. This decreased monthly payment will be in line with the home buyer's increased equity in the property and will provide funds to make repairs which become necessary after a house has been built four years. A Building and Loan loan on a home up to 70 per cent of the appraised value is a safe loan because the borrower begins immediately to amortize the debt.

Needless to say, the greatest difficulty with the above

arrangement at present is to secure the original four year straight loan for 60 per cent of the sale of the property. In this locality, three year, 50 per cent straight loans have been in use for so long that they have become an institution which defies any change. A change is being made slowly and the signs point to the day when four and five year loans will be regular order. A local loan dealer told the writer some time ago that he would make five year loans when he could not secure three year loans. This I feel is the attitude of most loaning agencies.

Home loans properly placed are a prime investment. The first requirement of such a loan is good construction. Once you have a good house in a desired residential district, the next step toward a safe loan is to get a reliable family in the house. If the location, construction, and moral risk are satisfactory, then a 60 per cent four or five year loan is safe and a desirable investment, provided a payment schedule is worked out within the income of the buyer. If the purchaser cannot pay at least 1 per cent per month on the principal besides interest on the unpaid balance, then the purchase is too expensive and should not be made. Thus it follows that any financing in such a case is not desirable as an investment.

To be fair to all concerned, we should compare the investment merits of home loans and bonds and stocks. A good investment bond or a stock paying 5 per cent is very hard to find today while there are many good first mortgages on homes, the very foundation of America, to be had at 6 per cent. The main reason for this condition is that home mortgages lack the marketability enjoyed by bonds and stocks. This difficulty is being overcome by some companies issuing participations, which is nothing more than bonds of the issuing company based on a number of mortgages placed in trust. Four and five year participations in this district sell to earn as low as 5 per cent. Even with participations, we still find the lack of proper marketability for first mortgage home loans.

Wider distribution can best be secured by educating the public to the desirability of this type of investment. It has been done with other securities, why not for the home buyer's loan? One of the steps in this direction is to place these participations on a regular constituted market where they can be traded in the same as other securities.

Those engaged in building, selling, and financing homes should not leave a stone unturned until home loans are given their rightful position in the investment world. We should make it as easy as possible for a family to own a home, with due consideration of safety for builder, buyer, and financier. Then we will have a nation of happy home owners.

Yours very truly,

(Signed) V. C. MCKENZIE,

Utility Employees' Savings and Loan Assn.

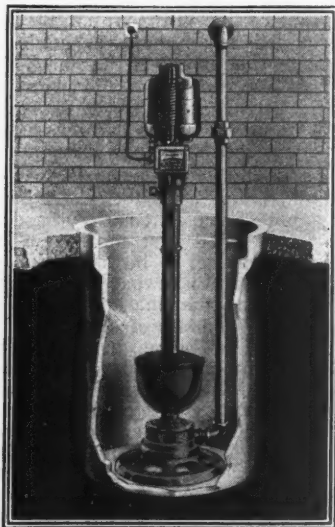
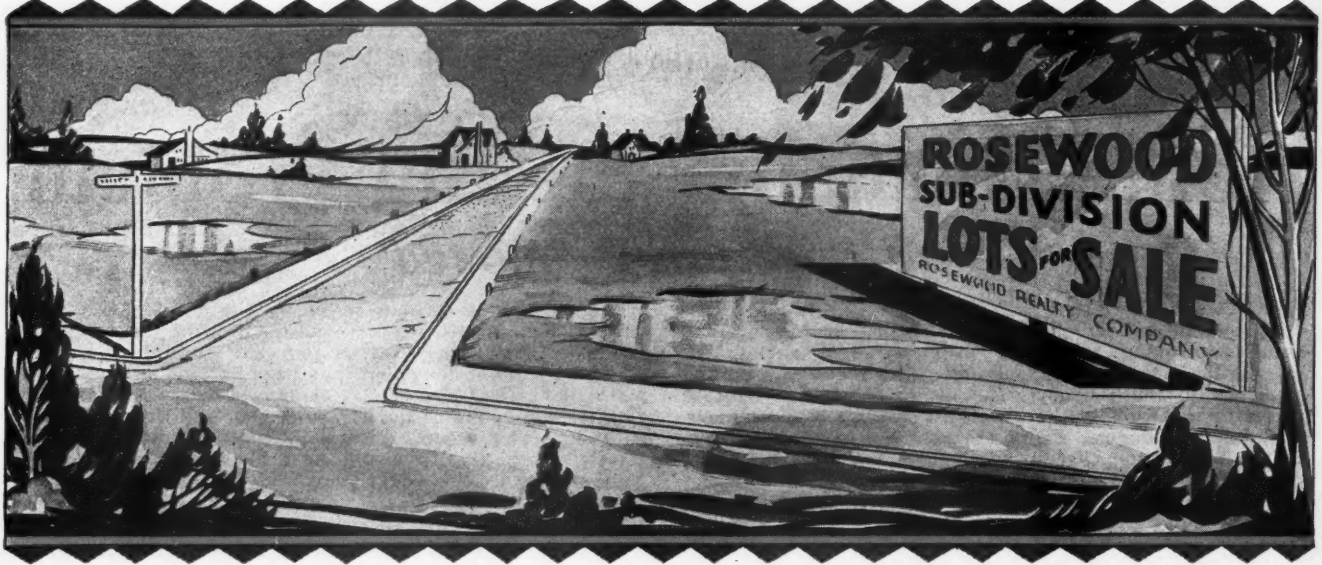
What do our readers think of these suggestions? Home financing is a tough problem; but it must be solved. If builders, dealers, and realtors can't or won't master it, others will. Your comments or experiences will be welcome for publication here.

EDITOR.

**Next month we present
our ANNUAL REFERENCE
and DIRECTORY NUMBER
for 1929. It will contain
many features of unusual
interest and value, including
our famous GREEN PAPER
DIRECTORY section of
Commodities and Trade
Names. ★ ★ ★ ★**

Don't miss this big issue.

Lack of Drainage is no Obstacle in Speculative Building

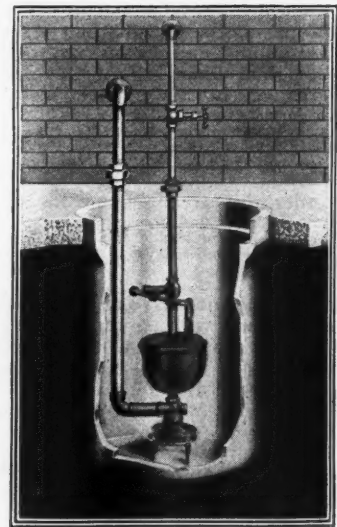


Penberthy Automatic Electric
Sump Pump

THE builder who operates in the newer subdivisions where there are no sewers, can offer his prospects all the advantages found in the older districts. A dry basement is no longer dependent on a sewerage system.

A Penberthy Pump automatically removes all seepage and drainage from the basement as soon as it accumulates. It is inexpensive, dependable in operation and requires no attention.

Your plumbing contractor can quickly supply and install either the electric or hydraulic Penberthy Pump. There is a size for every condition.



Penberthy Automatic Cellar
Drainer (water operated)

PENBERTHY INJECTOR CO.
Established in 1886 DETROIT Canadian Plant Windsor, Ont.

PENBERTHY PUMPS
PREVENT FLOODED BASEMENTS

Established
in 1886



Canadian Plant
Windsor, Ont.

AMERICAN BUILDER



BERNARD L. JOHNSON, *Editor*

105 West Adams St., Chicago—30 Church St., New York City

January Building Figures

TOTAL construction contracts awarded during January in the 37 states east of the Rocky Mountains amounted to \$409,967,900, according to F. W. Dodge Corporation. These states include about 91 per cent of the total construction volume of the country. When the above figure was compared with the total for the corresponding month of last year there was a decrease of 4 per cent and when compared with the total for December, 1928, there was a 5 per cent decrease.

Analysis of the January contract total showed the following important classes of work: \$138,068,600, or 34 per cent of all construction, for residential buildings; \$100,378,000, or 25 per cent, for commercial buildings; \$66,522,000, or 17 per cent, for public works and buildings; and \$63,108,900, or 16 per cent, for industrial projects.

During the month of January there was \$818,284,000 worth of new projects reported in contemplation in the 37 Eastern states. The above figure was 13 per cent ahead of the amount reported in December, 1928, but there was a drop of 10 per cent from the amount reported in January of last year.



Establish Appraisal Code

DEFINITE action establishing a platform of sound practice for the appraisal of real estate was taken at the recent annual business meeting of the National Association of Real Estate Boards. Standards of practice for realtor appraisers and for appraisal committees of member real estate boards were adopted by the Appraisal Division of the Association. The detailed statement of what constitutes sound appraisal practice outlines the appraisal method step by step, enumerates essentials which it is unethical for the appraiser to omit from his appraisal certificate, details proper practice for investment property and service property and states specifically essentials to be observed to insure the soundness of an appraisal made to determine the security for a loan.

It condemns "summation" appraisals as unsound, inaccurate and misleading.

The statement as adopted is prefaced by definitions of terms which have become technical terms in the appraisal of real estate and is accompanied by a glossary of such technical terms.

The Division further adopted standard forms for the appraisal of business property, industrial property and farm lands.



Fully Equipped Kitchens

SPEAKING before the National Housing Conference, at Philadelphia, Miss Hildegard Kneeland, of the Bureau of Home Economics, United States Department of Agricul-

ture, stressed the point that, while it is unquestionably worth while to educate the housewife to increase her efficiency, it would be still more effective to educate the architect and builder to an understanding of what is needed in an efficient kitchen for the housewife, and pointed out the domestic kitchen still remains "our most important workshop," and that "if we are to have scientific kitchens we must build them in the first place."

"The job of educating the architects and builders is a much easier one than that of educating the housewives. Compared with 26,000,000 housewives, there are only 90,000 builders and building contractors and 18,000 architects listed by the 1920 census.

"It is desirable that all requirements for the scientific kitchen be met by the builder—that he equip the kitchen completely with refrigerator, cabinet, serving and stacking surfaces and all facilities for storage. For it is only through building in the equipment that it can be made fully efficient as well as harmonious and attractive and easy to keep clean. It is also only by building in that its provision is assured. If the family must provide the missing units they will, all too frequently, be lacking, or when provided will fit badly in the space allowed. Can we not come to the full equipment of the kitchen as a part of the cost of housing, just as we now accept the built-in closets in place of the portable chests and wardrobes which used to disfigure the bedrooms?"



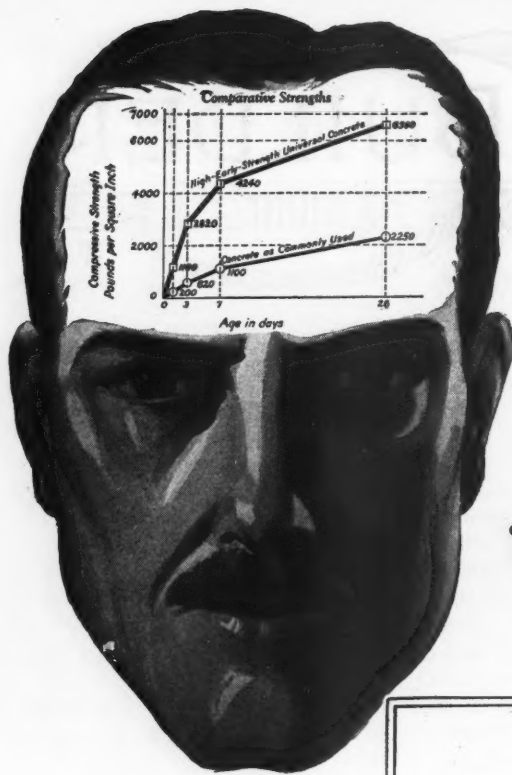
Testing "Battleship Deck" Floors

THE work now being done by the American Institute of Steel Construction, Inc., toward the development of the "battleship deck" floor system was recently explained by Lee H. Miller, Chief Engineer of the Institute.

"There is probably no part of a building construction," said Mr. Miller, "that has failed to meet engineering and economic requirements as much as the floor systems that have been devised. Perhaps this condition is natural when we realize that the floor system of a building provides support for the live and dead loads and, in addition to this, must provide space for the various other facilities that are required in buildings, such as electric conduits, heating and plumbing pipes, etc.

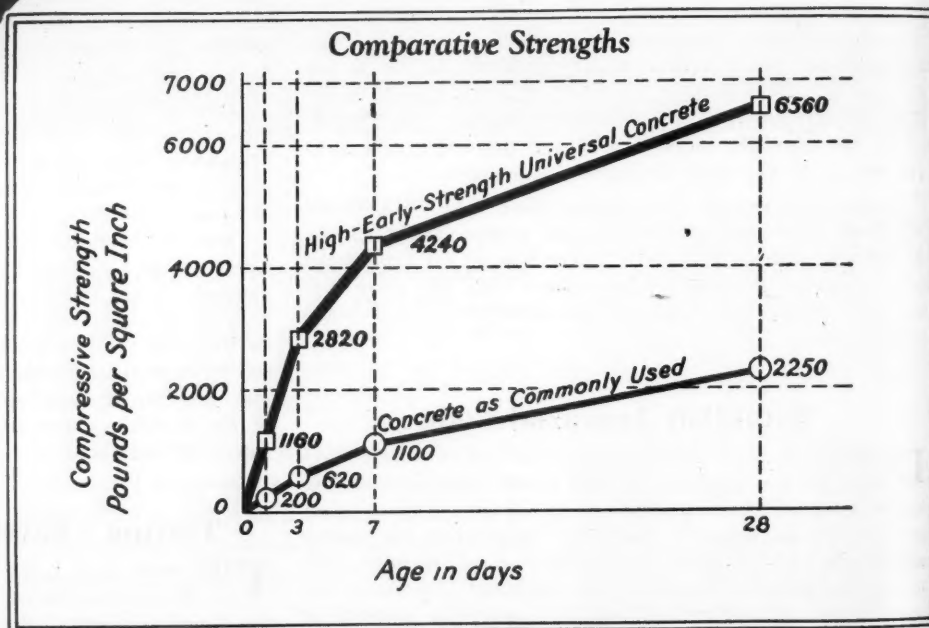
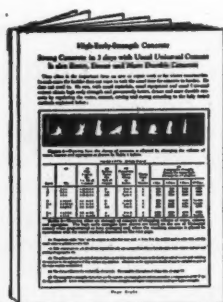
"The average weight of a floor is from three to four times as much the weight of the steel work in the skeleton frame. It is my belief that the all-steel floor construction, which we have developed from the idea of the battleship deck, can be properly protected against fire on the ceiling side and yet reduce the dead load of the floor construction by 20 pounds or more per square foot.

"We are going to continue tests on this particular type of floor construction and when perfectly satisfied with the results, will offer it free to the public through our membership. This new 'battleship deck' floor should reduce the cost of construction to a considerable degree."



Store These Facts

where they'll be ready for your use



A working knowledge of the latest information on high-early-strength concrete becomes more and more vital to all builders.

The above graph gives an instant and lasting idea of both high early and high permanent strengths obtainable with the usual Universal portland cement. The booklet at the left is chock-full of photographs with brief descriptions of jobs on which *High-Early-Strength Universal Concrete* has saved both time and money. Condensed, easy-to-use tables give the methods by which it is made.

Store the facts contained in both graph and booklet where they'll be ready for use when next you need 3-day concrete or water-tight, durable concrete!

One Standard Cement for All Concretes and Mortars
Universal Portland Cement Co.
 Subsidiary of UNITED STATES STEEL Corporation

Chicago Pittsburgh Minneapolis Duluth Cleveland Columbus New York

Concrete for Permanence

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Universal Portland Cement Co.
 208 So. La Salle Street, Chicago
 Without obligation, please send me your new booklet giving full details for securing strong concrete in 3 days with the usual materials and labor.
 A.B.-5-29

EVERYBODY'S BUSINESS



The End of an Era

By FLOYD W. PARSONS

THE decade just ending marks the close of a most remarkable epoch in world finance. It brings us to the finish of a period of post-war credit inflation. In the 10 years following the entrance of the United States into the war, this country gained approximately \$2,000,000,000 of gold. This was in the nature of an accident that no one could really forecast.

Under our present Federal Reserve Banking Act, an increase of \$2,000,000,000 in the nation's supply of gold has meant an increase of about \$30,000,000,000 in our total of available bank credit. Never in the history of the world has any country experienced such sudden and enormous credit expansion. The inevitable result has been a record-breaking advance in security values.

Now business men in America must face a reversal of this tremendous movement of gold. Already \$500,000,000 worth of the precious yellow metal has been sent abroad to restore other nations to a sound basis of finance. This means that within the span of a single year the United States has suffered a curtailment of \$7,000,000,000 in its total of banking credit.

But in the meantime, there has been an increase instead of a contraction of loans. The result has been high interest rates and these have diverted savings, profits and other free funds from permanent investments into the stock market. In the last 12 months even our banks have sold \$800,000,000 worth of bonds to release funds to meet the decline of deposits and for use in the short-term money market.

Notwithstanding much opinion to the contrary, it is probable that high interest rates represent something more than merely a temporary condition. They have come from competitive bidding for money, mostly for speculation, and have not resulted from the exercise of strong-arm methods on the part of the Federal Reserve System. The Reserve Act was designed to maintain the integrity of the nation's currency, and in securing this objective it forbids the withdrawal of gold for speculative purposes.

Excessive gambling in the prospective developments of the future must ultimately restrict purchasing power and check industrial activity by subjecting legitimate business to abnor-

mal interest rates. Furthermore, any form of inflation that creates apprehension by over-capitalizing hopes is destructive because our chief banking strength lies in the confidence of the public. We need to be reminded at times that the reserves of our banking system are lower in proportion to liabilities than those of any other important banking system in the world. All the gold in the United States Treasury, plus the reserves of our banks, when measured against aggregate liabilities, gives not 65 per cent, but only 6.5 per cent.

The public's chief interest should be in production and whatever contributes to it. A tremendous rise in the prices of stocks does not lower production costs, multiply earning power, enlarge corporation assets, or increase the real wealth of the country. It is simply a revaluation on paper, founded largely on exaggerated expectations that ignore difficulties and disregard the time element. From the standpoint of the welfare of business as a whole, the only difference between transferring stock certificates at a price of \$200 per share instead of \$100 is that a much greater amount of money is tied up, thereby increasing the cost of credit for all uses.

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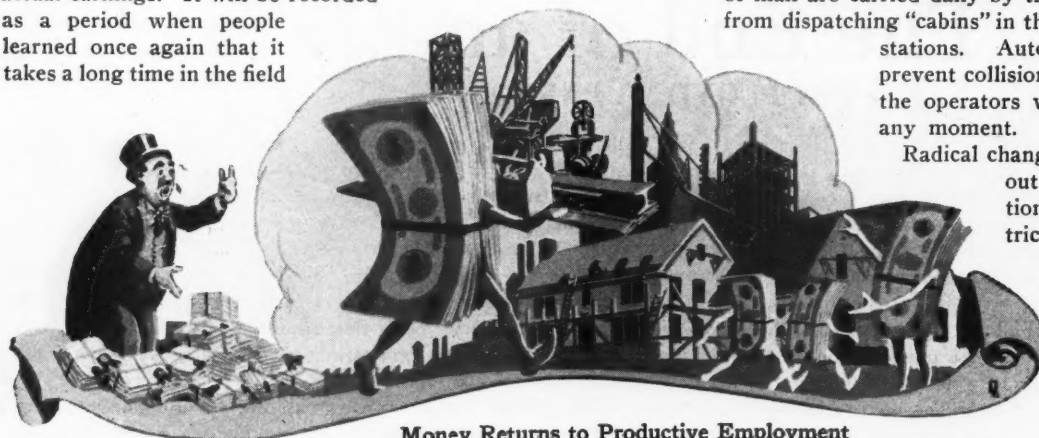


Courtesy "Scientific American."

The Edison Parade Down Fifth Avenue in 1884.

When the present enthusiasm for get-rich-quick methods has subsided and attention is once again directed to the vital realities of the present moment, then we will recognize more clearly the danger of allowing the stability of the American money market to rest in the hands of private lenders who feel no sense of national responsibility and who might be stampeded by an unexpected happening. Bank credit always has been and always will be far superior to private credit.

It is in this great field of money management where we may expect developments that will mark 1929 as the year that ended an era. It will be remembered as a time of readjustment in interest rates that restored the prestige of bonds and that established security prices on a basis of actual earnings. It will be recorded as a period when people learned once again that it takes a long time in the field



Money Returns to Productive Employment

of business and industry to make dreams come true; that bitter disappointments nearly always accompany the execution of even the most logical and fascinating plans set forth on paper; that gold is a much desired article in foreign lands as well as our own; and that other nations have brains and resources as well as the United States.

For 10 years we have had not only the normal increase of national income to work with, but in addition about \$15,000,000 of bank credit for each million dollars of gold imports, and this expansion of credit has gone on at a time when gold imports have been running at the rate of several hundred millions per year. Compare these years that have passed with the immediate future when our purchasing power will be reduced to actual current income, with only a small annual addition to the gold reserves.

We are now entering another clearly defined period of radical change—a time of returning normalcy. It will be disclosed that manipulation of stock values has no place on the asset side of the business ledger; that the soundness of current prices is determined by what the ultimate consumer will pay; and that the ultimate consumer is the one who creates the tin-box demand, which is the only demand for securities that actually represents capital entering industry. It will also be made plain that no matter how much the wealth of a country may increase, there can be no increase in the volume of bank credit unless bank reserves also increase.

The future for American business was never brighter. The note of optimism sounded by the leaders of industry at the commencement of 1929 indicated widespread confidence in continued prosperity. But it will be a prosperity in the midst of which hundreds of expectations will fail of realization and hundreds of advances will be made in directions not now anticipated. Money will turn from the field of speculation to commercial channels where it will serve best to build up new industries and increase purchasing power. Success and disaster will come more speedily than ever before. Competition will be between giant concerns, and the list of outstanding business successes a few years hence will disclose names that are today

unfamiliar. We will then wonder how people of the present day reached the conclusion that the effects of the great post-war tidal wave of gold could be maintained indefinitely.

Indicative of what is coming, let me paint a quick word picture of a few current scientific developments. Most attention is now being given to astonishing refinements that add tremendously to human efficiency. Yesterday we were busy discovering new elements, new laws and new forces. Now we enter a period when chief attention will be devoted to bring about more effective utilization of the things we already have.

Over in London they are now operating crewless trains of 33 cars to speed the mails underground from collection boxes to delivery points in the city. About 23,000 bags of mail are carried daily by trains that are controlled from dispatching "cabins" in the different subterranean stations. Automatic safety cut-outs prevent collisions, and indicators inform the operators where the trains are at any moment.

Radical changes are coming throughout the field of transportation. A new type of electric locomotive is designed to operate from either trolley or storage-battery power. The storage batteries are automatically recharged when power is supplied by the trolley. This locomotive

provides freedom from smoke, noise and noxious gases and can be used to switch cars into industrial plants and other places where there are tracks, but no trolley connections.

A big eastern carrier is now testing out a three-power locomotive which gets its energy from any one of three sources—oil, electricity or a battery. This great machine carries its own power plant, and when operating on non-electrified track, can switch over to a storage battery charged by an oil-engine, connected directly to a generator. As the change-over from external to internal power supply, or vice versa, occurs automatically, lights are provided to indicate to the engineer under just what condition of operation the equipment is running.

A recent innovation in the way of a passenger coach for highway service, is a monster double-deck Pullman bus that has berths for 26 people and is equipped to supply hot meals during the days consumed in a long journey overland. Each of the 13 compartments has running water and a built-in thermos bottle. At the back of the coach is a lavatory. Although this bus is 34 feet long and has two decks, it is only 10 feet high. Its motor is detachable so that at certain points during the long run a fresh motor can be substituted for the one that has been in use. This plan eliminates the necessity of any delay to overhaul the engine during the trip.

There is an endless variety of ingenious schemes for traffic control. All signal lights in one city are now regulated by the radio waves sent out by a vacuum-tube transmitter. This unique system replaces the time-clock method of changing the colors of the traffic lights. A mid-western town uses an automatic "sun switch" to control the illumination of 100 miles of streets. This astronomical clock turns on the lamps when the sun sets in the evening, and switches them off at the coming of dawn.

Even more astonishing is an apparatus that will control suburban traffic by means of sound waves. This invention is intended to reduce the loss of time on heavily-traveled highways where there is a small cross-flow of traffic at various intersections. The ordinary automatic signal plan

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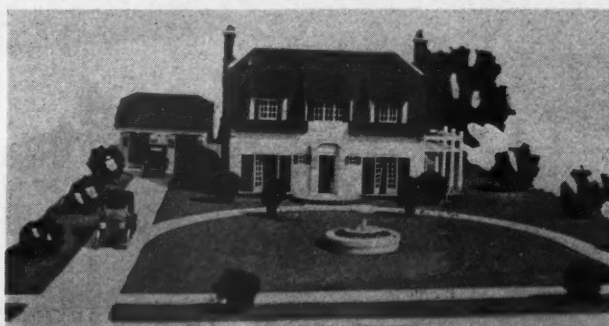
Architectural Students Produce Models from Which Houses Are Actually Built

By EDWARD E. PACKER,

Architectural Instructor, Libbey High School, Toledo, Ohio

ARCHITECTURE is becoming one of the most interesting and important of our school subjects. It is cultural as well as practical. Every boy and girl should know enough about architecture to distinguish the good from the bad and to be able to plan the "Dream House" that everyone at some time strives for, in the course of their experiences.

We try various methods to stimulate the interest of the pupils, and to show them the purpose of the study of architecture. The building of models is one of the ways in which we endeavor to motivate our class room work. These models are carefully selected as to design, constructability, economy, and utility. Each year we build a house of a different type of architecture, that is adaptable to our modern dwelling requirements. Generally it is the type that is most



A Colonial House Model, the Idea for Which Was Taken from an American Builder Front Cover Home by the Architectural Students of the Libbey High School.

other's work and discuss problems relative to the job, as they appear.

The instructor is consulted when no mutual agreement can be reached. Scaled perspectives are drawn by advanced students, at the various angles, to show the job as it will appear in the natural view. Various defects of design are here discovered and corrected in the plan. Color combinations are studied to get the best effect, by tinting the per-

spective drawings.

The plans completed and everything made ready we begin the construction of the model. We use wall board in modeling the general shape, making a hollow framework upon which is built the details of the house. Each side of the house is drawn and shaped to the scale of $\frac{1}{2}$ inch to one foot. The windows, doors, and other openings are



From the 1927 Model and Plans Produced by These High School Students, an Actual House, as Shown at the Bottom of the Page, Was Built.



The 1928 Model, a Spanish Mission Style in White Stucco with Red Tile Roof, from Which a House Is to Be Built, in Toledo, This Coming Spring.

popular at the time in our vicinity.

The design for the house is carefully planned and drawn to a scale of $\frac{1}{4}$ inch to one foot, for plans and elevations, and a larger scale for details. The boys who are ahead in their regular work have the privilege of working on the plans and models. As many as 25 students will be working on the plan or model in the course of a day. They all know at the same time about the rest of the plan and work on different parts at different times. They check each



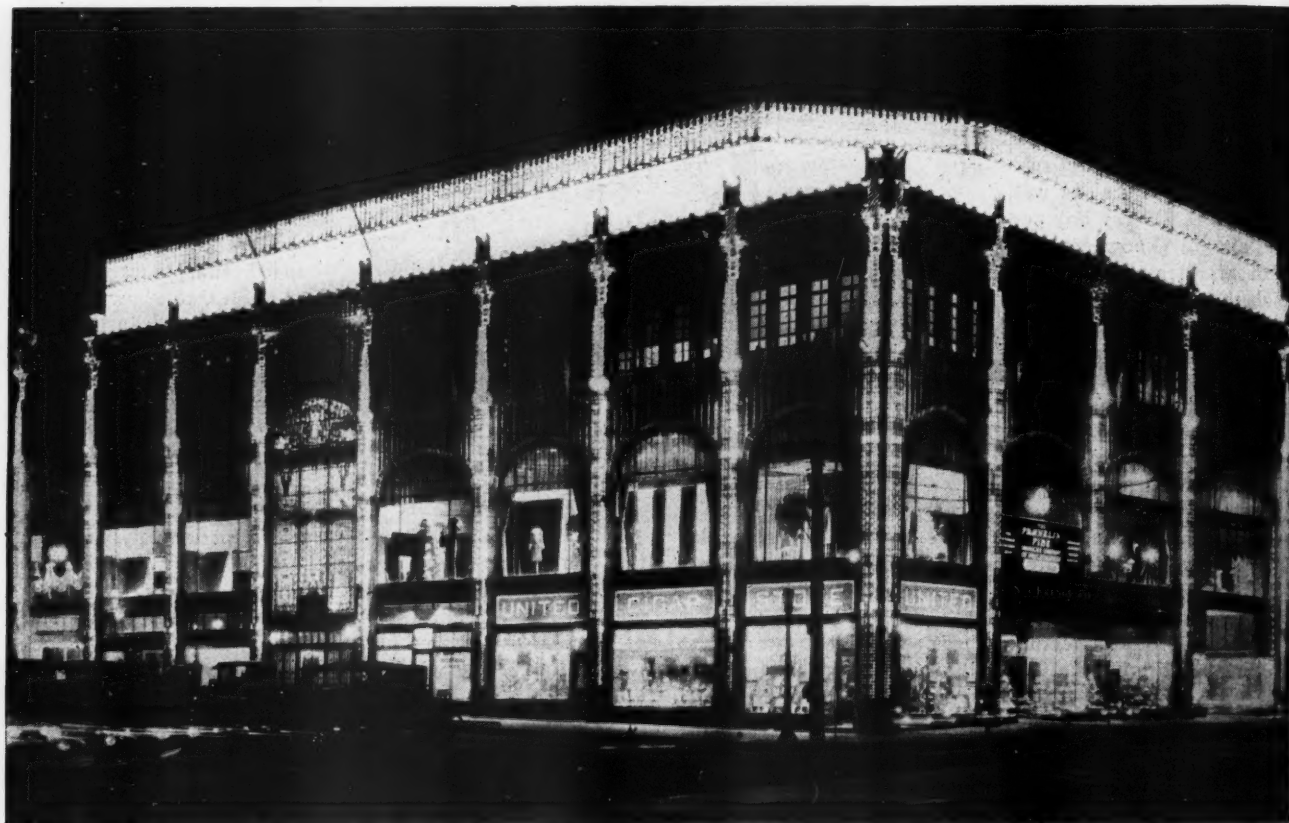
This House, in Toledo, Was Built from the 1927 Model and Plans of the Libbey High School Architectural Students.

cut out before assembling. Window sash are fashioned from cardboard and glazed with thin celluloid to represent glass.

The roof is laid out as a special problem, figuring the rise and run for each span and each gable. The shingles are strips of cardboard notched to represent real shingles. We use corrugated packing board cut into strips to represent tile roofing. The stucco is a product of glue, flour, coloring and plaster of paris, applied with a stiff brush to give a roughened effect.

(Continued to page 136)

Our Front Cover Demonstrates Flood Lighting In



Night Lighting of Exterior of McClatchey Building, Philadelphia

DRIVING westward out of Philadelphia at night, along Westchester Pike, the eyes of the traveler are suddenly presented with a rare spectacle, as he passes over a swell in the highway, approaching 69th Street. Here, the road veers off to the right slightly, giving one a clear view of the east and south elevations of the new John H. McClatchey Building.

Sixteen two-story art glass pilasters of numerous though harmonious hues and brilliantly illuminated, mark off the bays of the building from the sidewalk upward. From the top of each pilaster, a finger of light points skyward, to the gilded eagle above.

What is that blue-green above, a waterfall? No, it is changing in color; it seems to be fading; now it is white, now red and green; it is constantly changing, all colors of the spectrum making their appearance. A complete cycle of thirty color changes takes place every ten minutes, but the process is continuous and no traveler can pass without enjoying several beautiful color combinations.

The John H. McClatchey Building is on one of the busiest highways that enter Philadelphia. Here is the terminus for 19 transit lines, electric, steam, trolley and busses, entering or leaving Philadelphia. The building is an architectural masterpiece, typifying the futuristic design, and hence is a subject worthy of illuminating and is so situated with respect to traffic circulation as to warrant unusual and elaborate treatment.

On the opening night, the highway was glutted with traffic moving along at a snail's pace, the occupants of each car desirous of seeing as many as possible of the thirty color changes. What amazed most people is the fact that the John H. McClatchey Building is a store and office building, not a theater. Had it been a theater, folks would not have marveled so much, believing that the country's most enterprising theater manager had moved some of the stage color effects to the building exterior and made them automatic and continuous.

Prominent builders and real estate men of Philadelphia have told Mr. McClatchey that he is fifteen years ahead of his time. However, it is possible that these builders have not sensed the tremendous advertising value of mobile color lighting. They are not aware of the powerful aid to advertising of moving colors across the skyline of a city. Mr. McClatchey may be pioneering, but it is a fact nevertheless, that he has been situated at 69th and Westchester Pike for the last fifteen years, and has built thousands of homes for the middle classes in this neighborhood. He is an intensely practical builder, who has made a big success and he sees in mobile color a means of most quickly developing this new business center, and attracting to it, successful merchants. He is convinced that the magic agency, moving colored light, is justified by the low cost per person reached, and its effectiveness in making large numbers of people react favorably to his building and the business center in which it is located. In his invitation

More Business Through Changing Colors



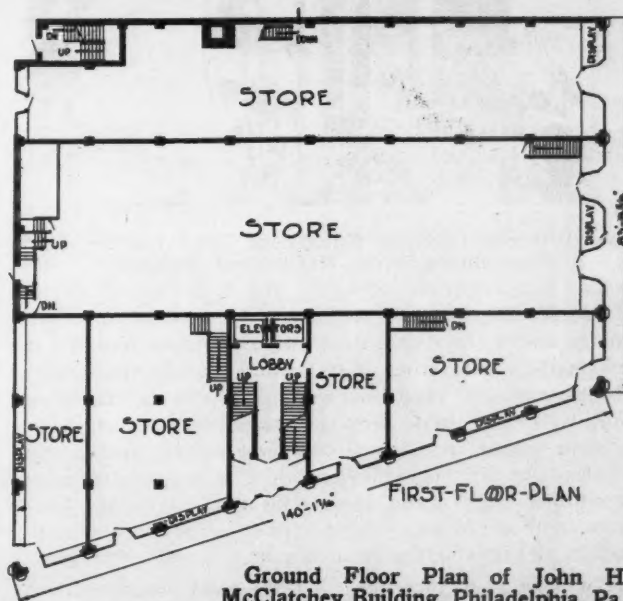
Description of Mobile Color Lighting, by A. Hopkins, Jr., and John A. Hoeveler

to thousands of business men, Mr. McClatchey makes the following statement:

"Expert electrical engineers, acting in co-operation with the foremost color artists, have produced an effect never before achieved. Critics agree that there has been consummated the most beautiful illumination on any business building in America. So radically different is it from anything ever shown on Broadway, that it marks a tremendous and novel advance in the lighting art."

The building is of fireproof construction, the exterior surface being glazed varicolored terra-cotta tile, of ornate design, manufactured specially for this building. The art glass pilasters previously mentioned, as will be noted from the illustration, extend from the sidewalk to the third floor. The framework of these pilasters is bronze filigree with varicolored art glass segments. This art glass work is considered a real artistic achievement. The art glass pilasters are illuminated by means of lamps and reflectors concealed within. Silver plated glass reflectors, placed in pairs at one foot intervals, and equipped with 60-watt inside frosted lamps, reflect their illumination to the white plaster wall surface, against which the art glass pilasters are placed. In this way, the art glass is illuminated by the indirect method resulting in a uniform distribution of light over the art glass, thus eliminating the bright spots which would be in evidence with unshielded lamps.

A total of 976 permafectors and 60-watt lamps are used in these pilasters. The load on the pilasters, therefore, is 58,680 watts, and this is a constant load.



Ground Floor Plan of John H. McClatchey Building, Philadelphia, Pa., Pronounced by Mr. Merritt Huse, President of the Illuminating Engineering Society, "The Most Beautifully Lighted Business Building in America;" So Radically Different that it Marks a Tremendous and Novel Advance in the Lighting Art. G. W. Parrish, Architect, Jamaica, N. Y.; Wm. Steele & Sons Co., Engineers and Contractors; Pittsburgh Reflector Co., Lighting Equipment; Stewart Walters Electric Co., Electrical Contractor.

At the top of each pier is a projector, equipped with a 250-watt floodlighting lamp bulb. This unit throws a strong beam of light upward, thus tying the upper structure and lower structure together. Since there are sixteen pilasters, this adds 4,000 watts of constant load. Also, the beams from the several projectors illuminate the golden eagles at the top of the third story.

The large art glass window over the main entrance is also illuminated indirectly. Concealed floodlights illuminate the walls of the stairway to a high intensity, but no direct light is permitted to strike the window. The diffused reflected light gives a most beautiful effect.

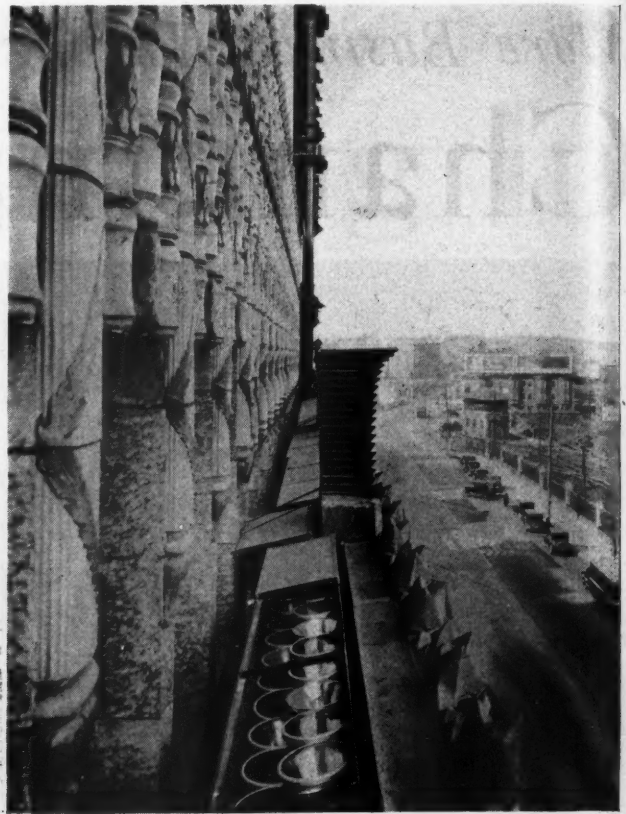
The fourth story of the building is set back several feet, as will be seen from the photograph. It is this portion of the building which is illuminated by means of thirty changes in colored light, repeating themselves every ten minutes. To accomplish this lighting, 573 reflectors, each equipped with a 150-watt lamp, are installed in weatherproof trough housings, behind the parapet at the fourth floor level.



Show Window Lighting Equipment Used for the First Floor Shops in the McClatchey Building.

In reality, there are six complete lighting systems for the illumination of the fourth floor elevation. One hundred of these units, constituting 15,000 watts, are equipped with red glass roundels, placed over the mouths of the reflectors; similarly, 100 of these units are equipped with deep blue; the same number with green; the same number with amber and the same number with light blue. Similarly, 100 units, constituting 15,000 watts, provide clear or unmodified light. These units are connected into circuit with the automatic dimmer, and provide the means for making color changes.

It will be seen, therefore, that the total connected load for the illumination of the fourth floor elevation is 90,000 watts. However, this load is not on continuously; at the most, three colors are on simultaneously, approximating 45,000 watts for a few seconds. The plan of lighting is as follows: For instance, the building surface may be bathed with red light from the 100 red units. Then the automatic

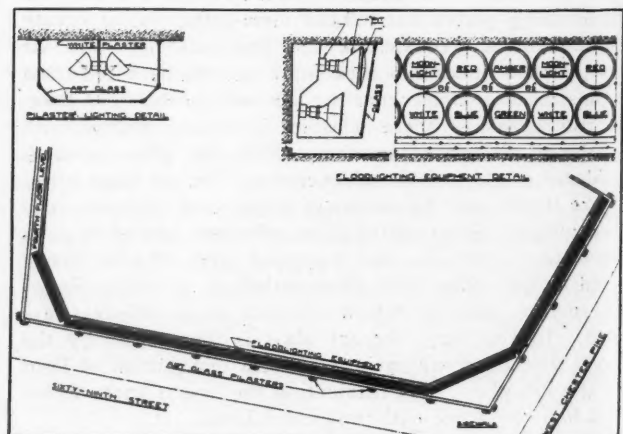


View Looking Down Into Color Lights and Reflectors Which Illuminate the Top Section of the McClatchey Building in Changing Colors.

dimmer gradually brings up the white or unmodified light intensity, gradually diluting the red and carrying it through the various tints of pink, until finally the red is completely overcome by the white, and the building appears in a beautiful flesh white. It is allowed to remain so for a few seconds, when the red is turned off and blue substituted therefor, the white remaining on full intensity during this change. Then the white is gradually dimmed out and the building comes up in a blue. It will be seen, therefore, that in this manner, quite a variety of color changes and combinations may be secured with a lighting system as flexible as the one designed for the McClatchey Building. The sequence of colors, as used on the McClatchey Building is as follows:

- (1) Red to white; (2) White to blue; (3) Blue to white, then to amber; (4) amber interval; (5) amber to moonlight; (6) moonlight to white; (7) white to amber; (8) amber to

(Continued to page 74)



Details of Lighting Installation.

BUILDERS- DEALERS-ARCHITECTS

Their Business Homes and Business Methods



Material Dealers Build Public Interest and Goodwill

MAKING an appeal to sell the idea of building and allowing the selling of building material to follow naturally is the highly successful advertising policy of Wood Brothers Company, lumber and building material dealers of Santa Cruz, Calif. This company has a reputation for its interesting and novel window displays, two of which are illustrated on these pages.

These displays are made in the big show window which can be seen in the illustration at the bottom of this page. They are changed at frequent intervals, keeping the interest constantly alive. One of the windows shown is a display of home building plans and the service which is furnished free to customers. The other was used at the time when the discoveries in connection with King Tut's tomb were getting first-page space in all newspapers. The effect was achieved by the use of sand, a miniature pyramid, palm leaves and more distant scenery painted on a canvas drop.

In the Wood Brothers office, at 332 Soquel Avenue, there is a large customers' room, separated from the rest of the office. This room is furnished in a most attractive style and in it are found a complete plan service supplemented by all important magazines which offer home building suggestions. It is to this office that prospective customers are taken and aided in the realization of their home building dreams.

Recently, however, the public was given an opportunity to become acquainted with the complete Wood Brothers plant, including not only the customers' room, but also the offices, yards and planing mill.

Late in November the section of the city of Santa Cruz, in which Wood Brothers are located, decided to hold a street carnival in celebration of the completion of the repaving of Soquel Avenue, which had been torn up and under construction all summer. This was a truly important event

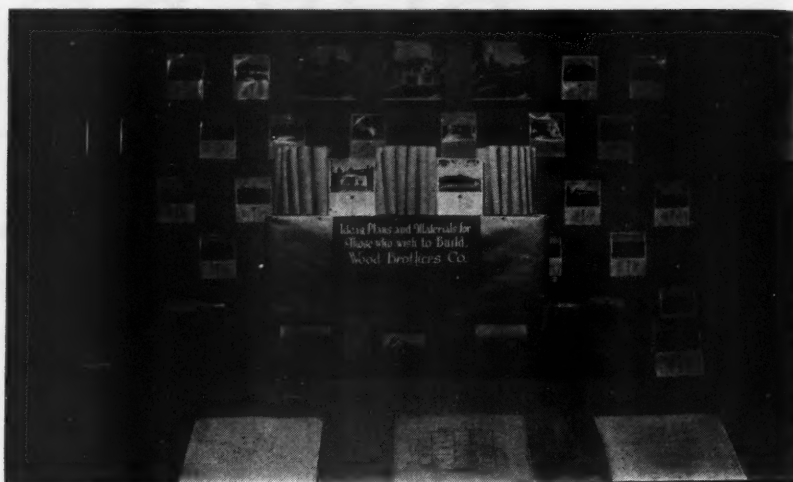


Here is the Complete Wood Brothers Organization with the Office in the Background. At the right side of the building is the large show window in which this company makes the many novel displays which have attracted favorable attention to its business.

because Soquel Avenue is one of the main highways leading into the city and an important link in the local transportation facilities. During the carnival every store and business establishment along the street was opened, not to do business, but to entertain the public as guests. The street was decorated from end to end, as were also the stores and the merchants gave away samples and souvenirs.

Wood Brothers decided to put on a special entertainment in their own plant. A meeting of the employees was held and it was decided to give a minstrel show with the employees making up the cast. Committees to take care of decorations, entertainment and all the rest of the details were appointed and the plan was carried through.

Company trucks were decorated and, mounted with seats, were used as conveyances to bring people from the down-



Home Building Plans and Service Form a Window Display Which Has Been Very Effective in Selling the Building Idea Resulting in Material Sales.



One Booth Along the "Redwood Trail" Contained the Butt End of Redwood Log with an Explanation of How Each Part Was Used in Making Building Material.

town section out to the celebration. One of these trucks also did service for parading the downtown streets before the show. A piano and complete band were on the truck and attracted much attention with their impromptu street entertainment and successfully ballyhooed the celebration.

After reaching the Wood Brothers plant, to attend the minstrel show, the people had to pass through the "Redwood Trail" and this was where the company got the big advertising benefit of the stunt. The "Redwood Trail" was an arbor built up of redwood boughs, running from the street curb in front of the offices through the office, customers' room and yards to the planing mill. In the customers' room were hung pictures of homes built in Santa Cruz for which Wood Brothers had furnished the materials. On each home was given the name of the builder, plastering contractor and others who had handled different parts of the job. In this way Wood Brothers' customers in the contracting lines were given some valuable publicity.

Through the yards on the way to the planing mill the "Redwood Trail" was com-

posed of a series of booths in which were displayed the different products which the company handles and which go to make up a finished house. For example, one booth was devoted to wallboard, another to doors and sash, another to prepared roofing, a fourth to shingles and others to stucco, brick and built-up roofing.

In each booth the display was so arranged as to point out the good features of the product as well as to explain the function of that particular unit in the finished home. In the booth devoted to shingles, for instance, a model roof was built up of redwood shingles and cedar shingles, everything complete even to the gutter. Over the roof was run a continuous stream of water and sign suggested that reroofing of the house would prevent trouble from leaky roofs. This display is known to have resulted in several reroofing jobs which were the direct result of the suggestion which it carried.

In the built-up roofing booth a section of roof was shown with all the materials used in its construction, a barrel of tar, a roll of felt paper, a pail of white rock and so on with a streamer running from each to a sign which gave the name of the material and the method of using it.

In the plastering booth a number of panels were mounted

(Continued to page 136)



An Employees Minstrel Show Was the Drawing Card During a Recent Celebration, but the Guests Found Much to Interest Them in Exhibits placed Along the "Redwood Trail."

Bill Glum Taboos *The Model Home*

By NELL MOORE

BILL GLUM, of Catnip Center, is all worked up over these model homes that are dotting the landscape here of late. A lot of these builders should stop and think twice, Bill declares.

He says: "If men are going to stop this stepping out the ladies are doing, they are going to have to leave more stepping for them to do inside the house."

According to Bill, in the old days, no respectable home had less than nine rooms, an attic and cellar and six or more porches, to say nothing of the pantry—Oh, the pantry! There was no chance of any woman getting out away from a home with a pantry in it.

A meal was a meal in those days and every time the table was set the pantry was ransacked. Keeping the pantry stocked filled a lot of matinee hours. If the lady



"A lot of the builders should stop and think twice," declares Bill Glum, of Catnip Center. He's all worked up over these model homes that are dotting the landscape of late.

to hunt a chair and stay there.

Leave out a lot of these stationary tubs and put a good old washboard and boiler on the screened porch, Bill advises. He thinks it would do more than any plan that he has heard suggested to check the appalling way women are leaving their homes for afternoon drives.

Now in the model homes of a few years back, Glum says that man's place was at the head of the table and he sat there and carved the fowl on holidays and took the first helping. But now in these times of cute, cunning, darling breakfast nooks, he is lucky to get an outside seat and on holidays he eats bacon and eggs with the rest of the family

because, in a lot of cases, having chicken on holidays went out with a lot of the other good old customs.



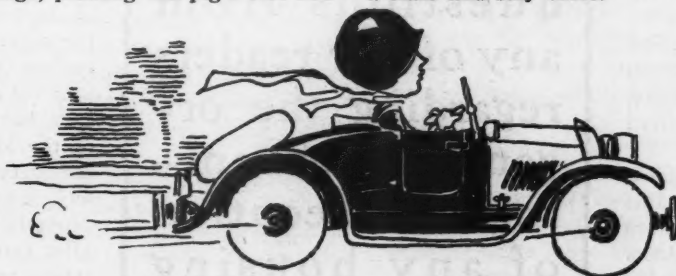
"Leave out a lot of these stationary tubs and put a good old washboard and boiler on the screened porch," Bill advises.

wasn't jamming the quinces, jellying the crabapples, preserving the watermelon rind or buttering the apples, she was chow-chowing the cabbage, pickling the pig's feet and sacking the sausage.

In Bill's time model homes were built to keep the ladies busy. Woman's place was the home, and by the time any of the sometimes frivolous minded creatures ran the broom over nine rooms, brushed up the attic and down the cellar, scrubbed the porches and dusted the winding staircase, she was glad enough



"In Bill's day, by the time any of the sometimes frivolous minded creatures ran a broom over nine rooms, brushed up the attic and down the cellar, scrubbed the porches and dusted the winding staircase, she was glad enough to hunt a chair and stay there."



Bill thinks a return to the old-fashioned home would do more than any plan he has heard suggested to check the appalling way women are leaving their homes for afternoon drives.

Any way you look at the matter the model home of today differs seriously from the one of Bill's time. And he declares that the gadding around of the female of the species will never be checked until the present day builders of these edifices can be prevailed upon to leave out some of these step-saving devices they are putting in now.



L. Brandt.

First Analyze *and* Plan Then —

UNTIL about 1916, there was no one profession that would undertake the handling of an entire housing problem or program, from the study of economic land values, the laying out of raw land, the planning of utilities, paving, landscaping, designing the buildings, and supplying construction methods for the most economic and efficient handling of construction work.

The various phases of this work were usually handled by several different organizations, professions and agencies. The real estate developer would buy raw land and engage the services of an engineer to lay out the streets and lots, and without consideration being given to the land, type or shape of house that might be built. The architect then found a building site with limited frontage and he did his best in working out a building to fit. The financial institutions making mortgage loans would look at it, place their own value upon it and decide how much they could safely loan.

Thus it was apparent that there was need for a service or profession that could handle and co-ordinate all these things. This service should be a broad thing. It had to accomplish an easy working together of planning, specifications, financing, production and selling, of a single unit made up of many parts.

I gave the title of "Housing Engineering" to this service at the suggestion of the other professions (the architects and engineers with whom I had been associated on many housing enterprises). They recognized that there was need of this kind of service to see the thing through as a whole and co-ordinate toward a definite end.

Most problems which are said to be complex seem to be so only because the approach turns and twists so that we lose our bearings; and this is especially true of home building. The details are so numerous and many of them so small that they seem insignificant.

We had to evolve a system that goes direct to the point; however, bearing in mind that it is one thing to get to the point and something else to know what to do when we get there. We must bear in mind that a problem stated is a problem half solved, but, on the other hand, a problem half solved is not solved at all.

The housing engineer must know when he gets to the point. In this he brings to the service the factors controlling each step in the problem and moves definitely with these as tools to do something. Then the supposed complications are not complications at all as the ability to

reduce everything to its elements is the most valuable of all facilities. The housing engineer's services were developed from a broad and extensive experience and with a knowledge of financing, real estate, planning and specifications, manufacture of building materials, architecture, construction methods and home ownership.

The Financing Problem

The most essential service in approaching a housing problem is to provide for adequate financing, in the easiest possible manner. Housing must be planned economically to meet the needs, earnings and the environment of the individual and the community. To work out a financing program, consideration must be given to the home purchaser's requirements, income, cash payments, monthly payments he can undertake—the terms then to be made to suit all these conditions.

For this purpose the real estate should be considered as to location, transportation, and a price of the improved building lots that will represent an economic value for the particular project. It is necessary to know the different classes of people to be housed, the type of house that should be built, the number of rooms required for each class, and the price. In economic housing it is important to design to a price fixed in advance, and to keep land values in reasonable proportion to the total cost of the home.

Adequate financing can always be procured for a project based upon the economic fundamentals of housing. The financial institutions look for and recognize these fundamentals in connection with loans. The housing engineer's cost analysis and financing program is easily understood, and provides the information which financial institutions require in order to assure maximum financing.

The Building Site

Many building sites are laid out in a more or less mechanical manner, without consideration of what may be the best form of layout for either the profits of the developer, the uses of the purchaser, or the interests of the general public. All buildings or surface structures may be reconstructed or altered in the course of time, but there is seldom any change in the location, width or grade of the streets after they are laid out and improved. Streets cannot be properly designed or located except after careful study of their possible future requirements.

No development can be carried on successfully without utilities such as water, gas, electricity and sewage

Mr. Brandt will be glad to answer questions from any of our readers regarding the organization, financing or execution of any housing development. • •

Build and Sell

By L. BRANDT
Housing Engineer

systems. As in the case of streets, the utilities are more or less fixed, and they, too, require a careful study and designing so they will function for all times as utilities and not as liabilities.

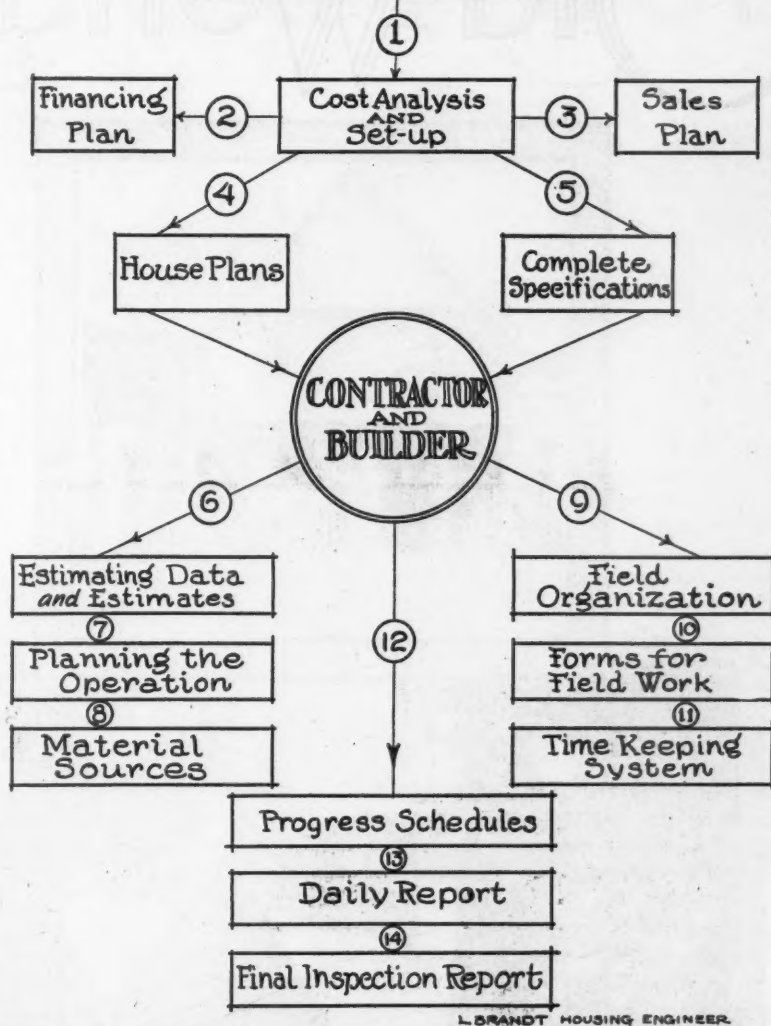
The service of the housing engineer is of great value in the development of the building site, since he visualizes the completed project as a whole, and co-ordinates the details of streets, utilities and housing. A project well planned in advance always costs less than if handled in an unorganized manner.

Designing and Specifying

In designing to a cost fixed in advance, the housing engineer is guided by a code. This code considers only the usable space in the rooms as efficient space. Access, space, such as halls, stairs, etc., while quite necessary, is considered the inefficient space. The more we can increase the usable space and decrease the access space, the more value we are able to put into the design. Furthermore, all houses designed according to the code have the efficiency of each plan figured on the basis of accommodating the amount of furniture required for each room. The furniture must be accommodated in such a manner as not to interfere with windows, doors, heating, electric switches, nor the line of travel through the rooms. No matter how small or how large the room, whether living room, dining room, kitchen or bedroom, if it accommodates the furniture in this manner, it will be a good room. It is also necessary to incorporate well worked out standards in design, which allow the use of materials of standard manufactured sizes, thus reducing the waste of materials and labor. The proper application of such standards has proved in some localities to effect a saving of 20 to 25 per cent under the prevailing prices and practices.

In the preparation of specifications for the houses, the housing engineer keeps in mind the prices for which the houses are to be built in order to sell within the price range, and this depends upon a knowledge of materials as a whole and the cost of working the same. A poorly prepared specification, not concise and clear, leaves too much to the judgment of the contractor and craftsman; the contractor in making his estimate will either over-

Methods, Data and Forms FOR Home Building



L. BRANDT HOUSING ENGINEER.

Chart of the Functions and Activities of the Housing Engineer.

estimate or underestimate the costs of the house, causing a loss one way or another.

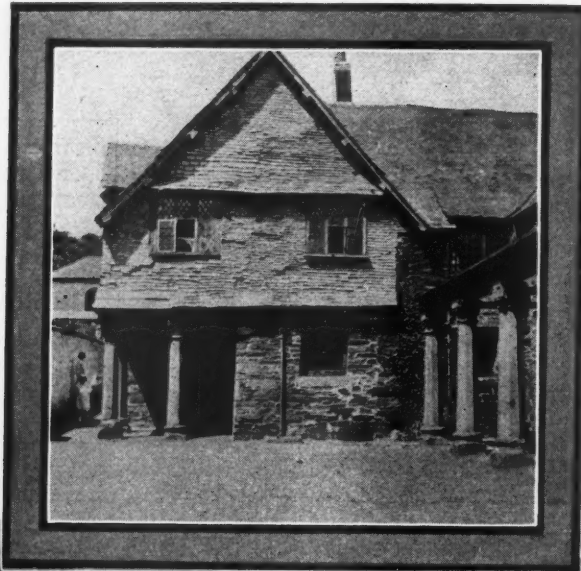
House Production Methods

The economic production of houses begins with estimating costs of building work. The most hazardous guess is that of labor output. It is not so much the cost of labor, but the unproductiveness and waste of labor that should be guarded against. It has been necessary for me in my capacity of Housing Engineer, to determine the day's output in each division of the work, so that craftsmen can be employed on a basis of understanding the amount of output expected of them. Thus supervision becomes more effective by a sub-division of the units of work.

When labor is considered from this angle, it is the cost basis for the contractor in making up his estimate, which represents values instead of just costs. I developed a method for estimating which provides for retaining the measurements taken from the plans. These measurements, when computed into units of material and work in each division, allow the contractor to separate his labor and materials in the estimate, giving a quantity survey of

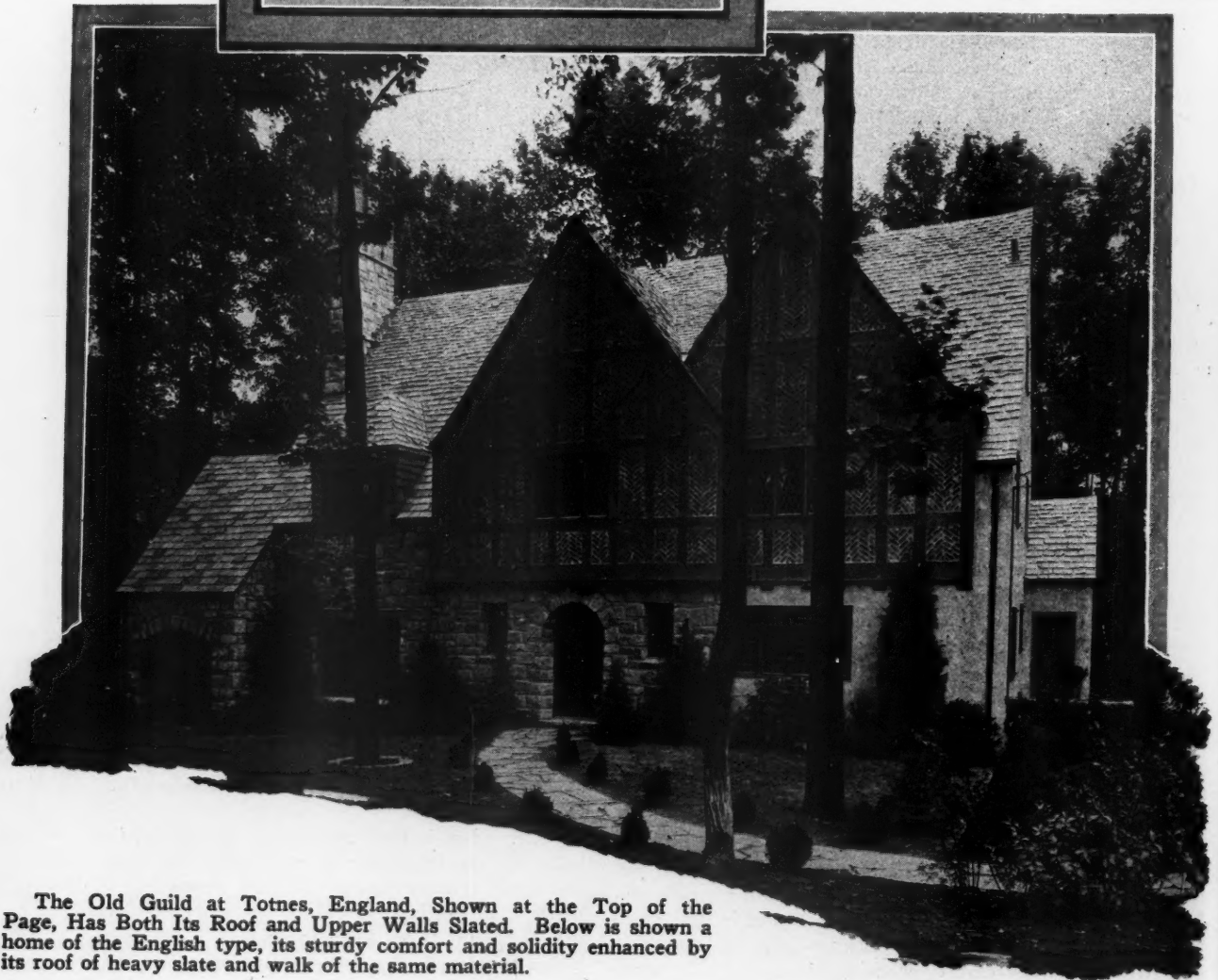
(Continued to page 76)

Old World Charm



THE roof plays a very important role in both English and French type houses. Whether it be broken by picturesque gables and dormer windows, or whether it broods gently over the structure in one long, beautiful sweep of line, the old world roof is a thing of beauty which Americans would do well to study.

Of course the earliest roofs in both France and England were thatch, and nothing more picturesque has yet been devised by man to cover his dwelling. Unfortunately, the picturesque quality is the chief virtue of thatch. As early as the sixth century in France and the eighth century in England, those who could afford it were using slate roofing on their dwellings, and slate became the accepted roofing for important public buildings. At Hartford-on-



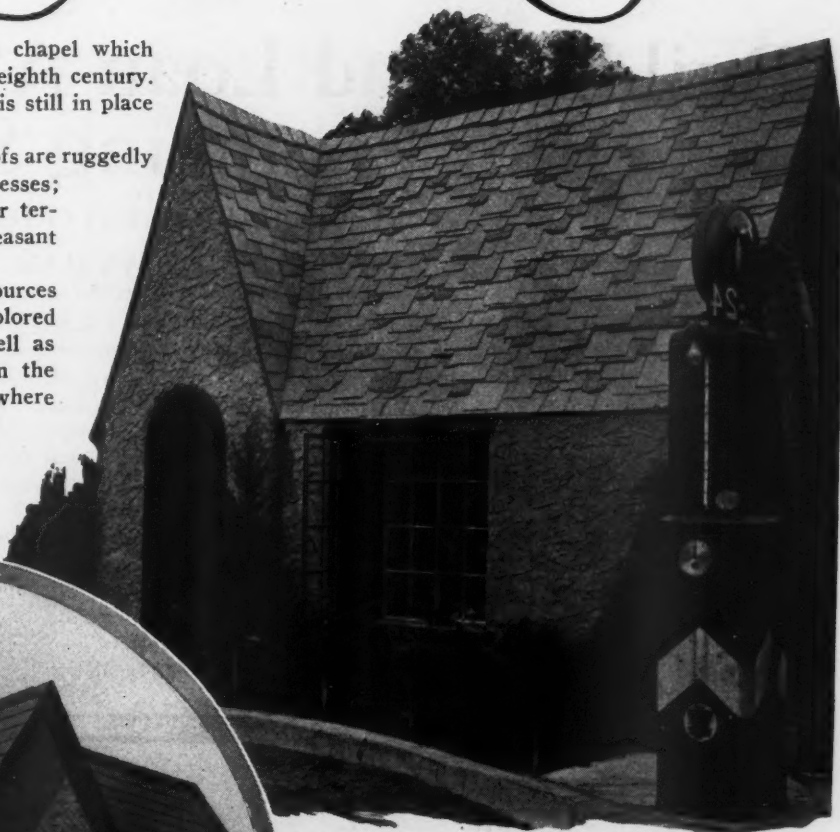
The Old Guild at Totnes, England, Shown at the Top of the Page, Has Both Its Roof and Upper Walls Slated. Below is shown a home of the English type, its sturdy comfort and solidity enhanced by its roof of heavy slate and walls of the same material.

in the Slate Roof

Avon, in England, stands an old Saxon chapel which bears a slate roof that was put on in the eighth century. Now, more than twelve centuries later, it is still in place and still weather-proof.

The most beautiful of old world slate roofs are ruggedly quarried slate of varying sizes and thicknesses; the English custom of using slate also for terraces, garden paths and fences creates a pleasant harmony between house and grounds.

America is fortunate in having rich resources in slate. Vermont has large quarries of colored slate, dark red, purple, and green, as well as some gray. The largest slate quarries in the United States are found in Pennsylvania, where a vast slate belt 10 miles wide and 30 or 40 miles long is found; a century of quarrying has not depleted this immense supply. Pennsylvania slate is all gray, but is



found in a range of several tones, so that beautiful effects are obtained by shading from the lightest blue-gray to the darkest.

PHOEBE COLE.



Above: Many a Pretentious House Might Envy This Tiny Structure with Its Picturesque Roof of Slate. Left: A modest dwelling with roof of smooth blue-gray slate that is as good looking as it is efficient. Below: A typical American adaptation of the low, picturesque French farm house type, appropriately roofed with rough-hewn slate.



HOME MODERNIZING



Building and Loan Associations Offer Financing Service

Remodeling Pointers Given

By JOHN M. WYMAN

of the United States League of Building and Loan Associations

IT is estimated that between 13 and 14 million homes in the United States need to be modernized. It is also stated with authority that the total expenditure necessary for this modernization is in the neighborhood of 26 billion dollars, or an average of about \$2,000.00 per home. In many cases nothing is necessary, perhaps, other than a good job of painting, or the installation of heating, plumbing or electrical equipment. On the other hand, there are hundreds of thousands of homes that are completely antiquated and need to be thoroughly overhauled in order to produce that degree of convenience, comfort, beauty and satisfaction to which every home owner is entitled.

There are many things which may be done to improve the old home. The old walls of a house, for example, may be covered with stucco, shingle, brick or new wood siding at an expenditure far below the cost of building a new house. This, of course, is possible only when the basic structure is sound. It is estimated that by this process a yearly saving in fuel of about 25 per cent can be effected.

It is frequently possible to improve the appearance of a home by a simple change of the front porch. It seems that the age of houses is largely surmised by the front porch. At the present time the large porch covering all or a major portion of the front of the house is considered out of date. The new style of architecture calls for porches on the side or at the back, or else demands that if they are in the front they shall be glassed in. The tendency at this time is toward the small neat terrace, or a "stoop." Home modernizing offers an opportunity for the home owner to make this change, thus giving his house a much more attractive appearance.

In times past it was thought that the roof had very little to do with the appearance of the home. This no longer is true. Roofs are now recognized as having a highly decorative value, and it has now become necessary in many cases, where the house is being modernized in general, to

make changes in the roof which will make it harmonize with the general contour and color scheme. The Spanish stucco, for example, looks exceedingly well with a green tile roof, and the broad white siding of the Dutch Colonial type is greatly improved by a bright shingle roof of wood or some other material.

We no longer expect to find windows with large panes of glass, which were so much in vogue a few years ago. The French window with its small panes has come to be quite the thing in dwelling house architecture, and here again is an opportunity for the owner of an old home to improve the appearance materially at a comparatively small cost.

Insulation is another way in which old homes can be made more serviceable. If the home happens to be in an extremely warm climate, insulation—particularly under the roof—will help to modify the intense heat of summer, or if the home happens to be in a cold climate, it will keep out a great deal of cold, thereby reducing the fuel bills to an appreciable extent. The installation of weather stripping around openings of every sort will also do a great deal to cut down heating costs.

It is hardly possible to say anything about modernizing without mentioning heating and plumbing. These, of course, are the most important and most indispensable items to be considered. Without them it is not at all possible to have a modern home; it is, therefore, advisable that in any modernizing that may be done the home owner

looks very carefully after the condition of his heating and plumbing system and sees that everything is not only in perfect order at the time, but that it is in keeping with modern requirements, and that it is of sufficient type and quality to meet the expectations of prospective purchasers in case the house should be sold within a reasonably short period of time.



PRESENTING a Duotone Feature Section of Architectural Designs, Including Quick-Selling Homes and Apartments and Business Buildings in the Modern Style.

(Continued to page 74)

ENTRANCE DETAILS

First Impressions of Authentic Beauty



Photographic suggestions for the most important detail of any dwelling—the front entrance. The upper view shows a graceful Adam motif for a Colonial house of wood. The view at the bottom shows a porch with Corinthian columns appropriate to a brick house in Georgian style. At the right is one of the popular sunshine terraces in Colonial style, and the entrance at the left shows a richly decorated Spanish detail.



Four Homes in a Row, Each of 6 Rooms Offer Economy and Satisfaction in Philadelphia

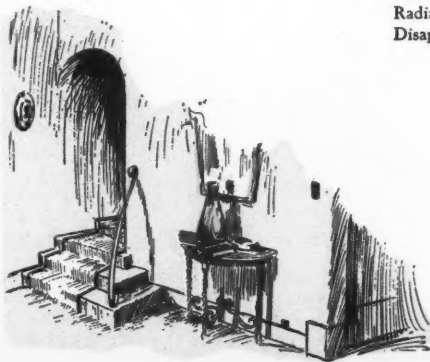
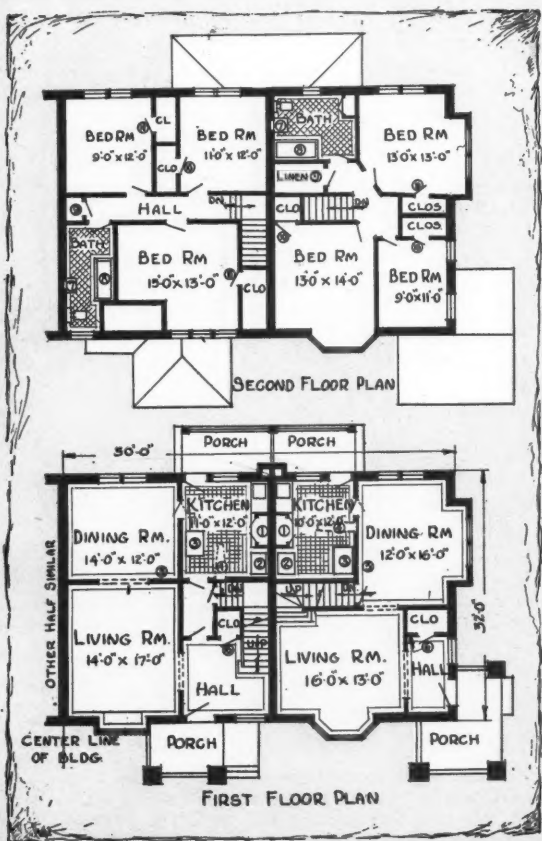
Key to Recommended Specialties of Equipment

The small numbered circles on plans represent the following:

- 1—Kitchen Cases
- 2—Refrigerator
- 3—Range
- 4—Ironing Board
- 5—Thermostat
- 6—Telephone Outlet
- 7—Medicine Case
- 8—Tub Shower Bath
- 9—Moth Proof Closet
- 10—Mirror Door

In addition to the above many items of modern equipment must be considered:

- Weatherstrips
- Storm Sash
- Screens
- Lighting Fixtures
- Convenience Outlets
- Electric Panel
- Washing Machine
- Ironing Machine
- Clothes Dryer
- Coal Chute
- Heating Plant
- Oil Burner
- Incinerator
- Water Supply System
- Hot Water Supply
- Water Softener
- Radiant Gas Heaters
- Electric Wall Type Heaters
- Casement Windows
- Dishwashing Sink
- Automatic Cellar Drainer
- Radiator Covers or Furniture
- Disappearing Attic Stairs



Key

The plans

1—L
2—K
3—R
4—R
5—C

In

items

be co

Weath

Storm

Screen

Light

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In This New England Colonial the Garage Balances the Sun Room

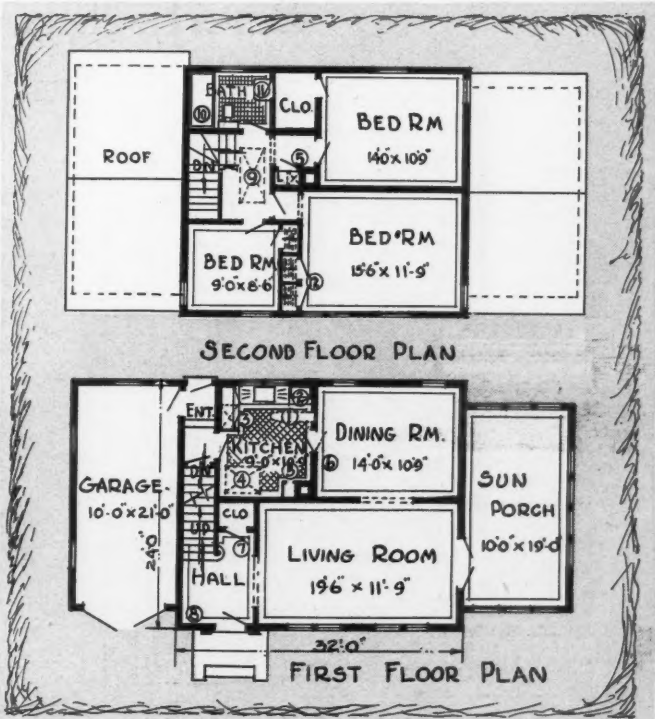
Key to Recommended Specialties of Equipment

The small numbered circles on plans represent the following:

- | | |
|-----------------|---------------------------------------|
| 1—Ironing Board | 6—Thermostat |
| 2—Kitchen Cases | 7—Mirror Door |
| 3—Refrigerator | 8—Built-in Mail Box |
| 4—Range | 9—Disappearing Stair |
| 5—Clothes Chute | 10—Tub Shower Bath |
| | 11—Medicine Case |
| | 12—Space Saving Closet Equip-
ment |

In addition to the above many items of modern equipment must be considered:

Weatherstrips
Storm Sash
Screens
Lighting Fixtures
Convenience Outlets
Electric Panel
Washing Machine
Ironing Machine
Clothes Dryer
Coal Chute
Heating Plant
Oil Burner
Incinerator
Water Supply System
Hot Water Supply
Water Softener
Radiant Gas Heaters
Electric Wall Type Heaters
Casement Windows
Dishwashing Sink
Automatic Cellar Drainer
Radiator Covers or Furniture.





A Studio Living Room

—is the Feature of This Beautiful Brick Home, Built at
Beverly Hills, California

Key to Recommended Specialties of Equipment

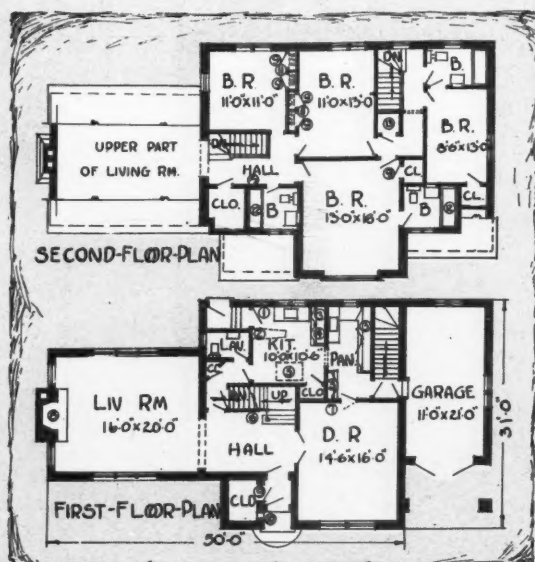
The small numbered circles on the plans represent the following:

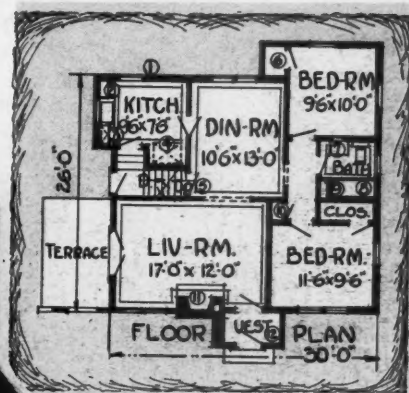
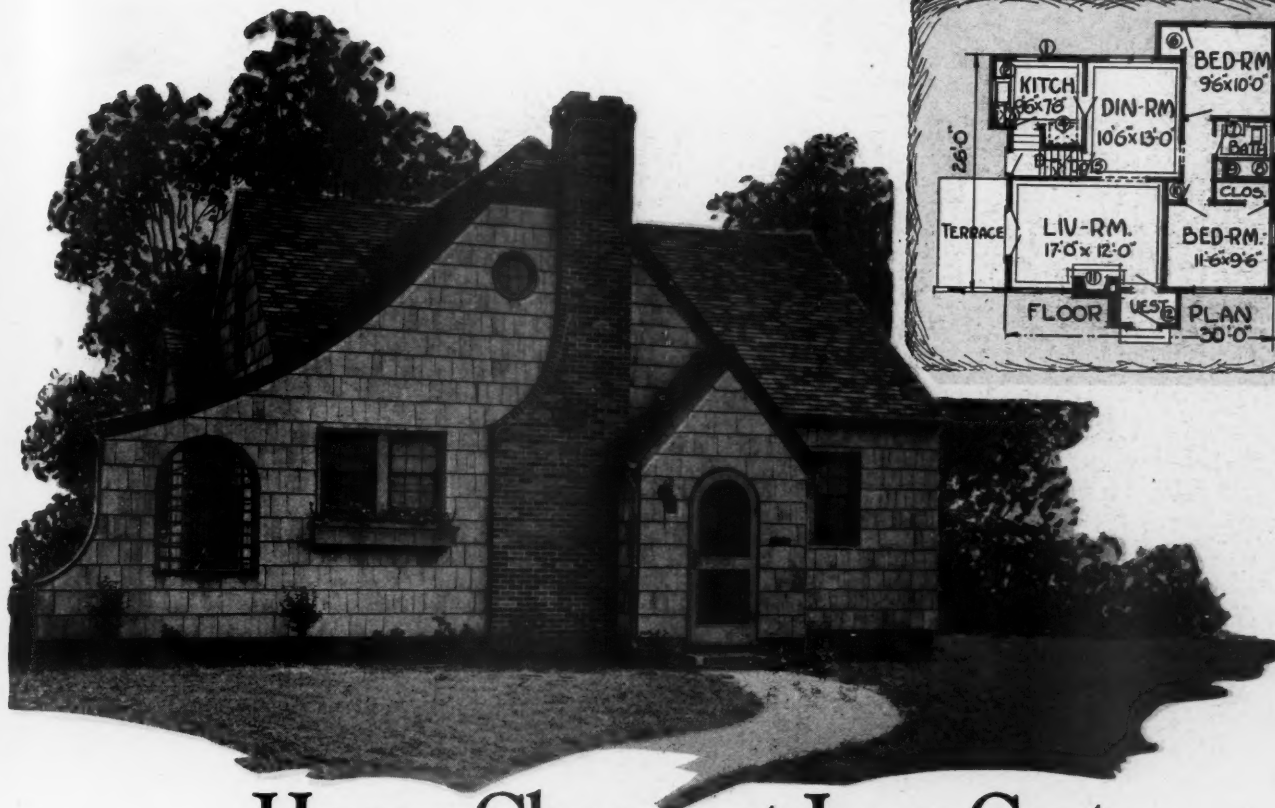
- 1—Kitchen Ventilating Fan
- 2—Ironing Board
- 3—Kitchen Cabinets
- 4—Refrigerator
- 5—Range

- 6—Phone
- 7—Thermostat
- 8—Fireplace Throat & Damper
- 9—Mirror Door
- 10—Built-in Mail Box
- 11—Space Saving Closet Equipment
- 12—Tub Showers
- 13—Moth Proof Closet

In addition to the above many items of modern equipment must be considered:

- Weatherstrips
- Storm Sash
- Screens
- Lighting Fixtures
- Convenience Outlets
- Electric Panel
- Washing Machine
- Ironing Machine
- Clothes Dryer
- Coal Chute
- Heating Plant
- Oil Burner
- Incinerator
- Water Supply System
- Hot Water Supply
- Water Softener
- Radiant Gas Heaters
- Electric Wall Type Heaters
- Casement Windows
- Dishwashing Sink
- Automatic Cellar Drainer
- Radiator Covers or Furniture
- Disappearing Attic Stairs





Home Charm at Low Cost

Two Dwellings of Small Size and Large Personality

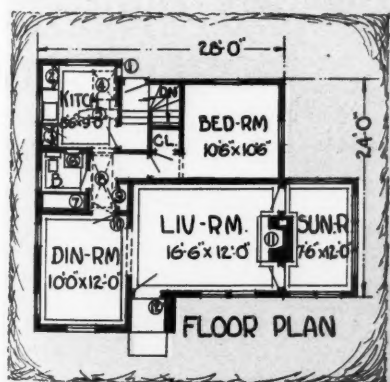
Key to Recommended Specialties of Equipment

Five-Room Design Above

- 1—Kitchen Ventilating Fan
- 2—Kitchen Cabinet
- 3—Refrigerator
- 4—Range
- 5—Thermostat
- 6—Space Saving Closet Equipment
- 7—Medicine Cabinet
- 8—Tub Shower
- 9—Linen Cabinet
- 10—Moth Proof Closet
- 11—Fireplace Throat & Damper
- 12—Built-in Mail Box

Five-Room Design Below

- 1—Kitchen Ventilating Fan
- 2—Kitchen Cabinets
- 3—Refrigerator
- 4—Range
- 5—Ironing Board
- 6—Medicine Cabinet
- 7—Tub Shower
- 8—Disappearing Stair to Attic
- 9—Linen Cabinet
- 10—Thermostat
- 11—Fireplace Throat & Damper
- 12—Built-in Mail Box



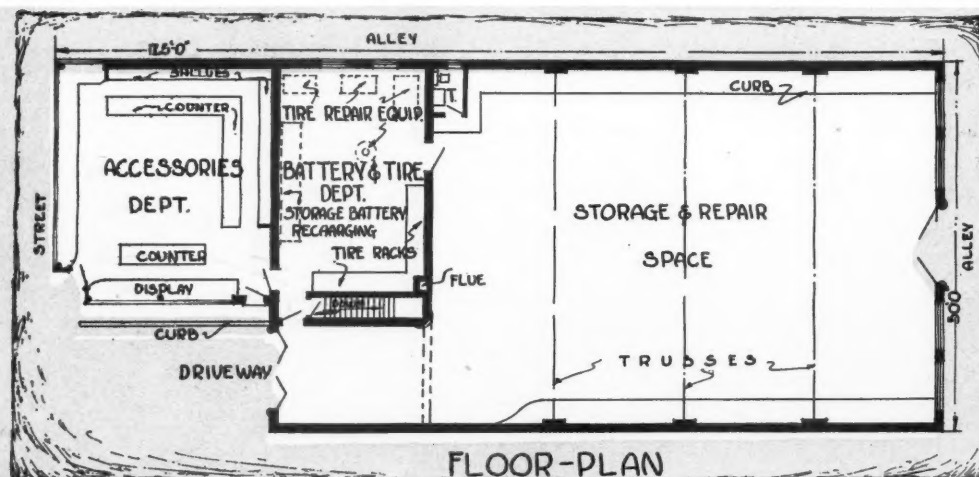


Auto Accessory Shop and Garage

A Good Design for a Much Wanted Business Building

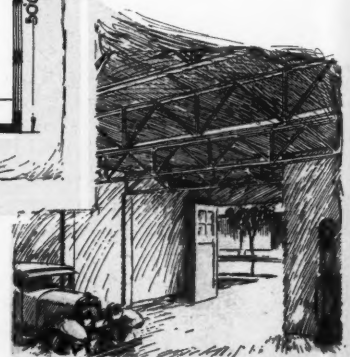
This building goes on a 50-foot lot, running back 125 feet to an alley. The Accessory Department at the front is well lighted from three sides, the arrangement of the driveway to the rear shop giving a fine display window on the side. This is protected by a concrete curb. Merchants like this arrangement for display purposes. They also like the corner entrance.

The battery and tire department are in a room directly back of the salesroom and partitioned off from the general garage space. Lighting of the large general room is from overhead skylights and the windows at the rear.



FLOOR-PLAN

Face brick laid in an interesting pattern combined with glazed terra cotta trim and an abundance of plate glass make the very attractive modern front for this business building. Architectural style and attractiveness pay big dividends today in the realm of retail business.



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The Lure of the SPANISH

A Five-Room House, Two-car Garage and Private Garden, All Snugly Secure

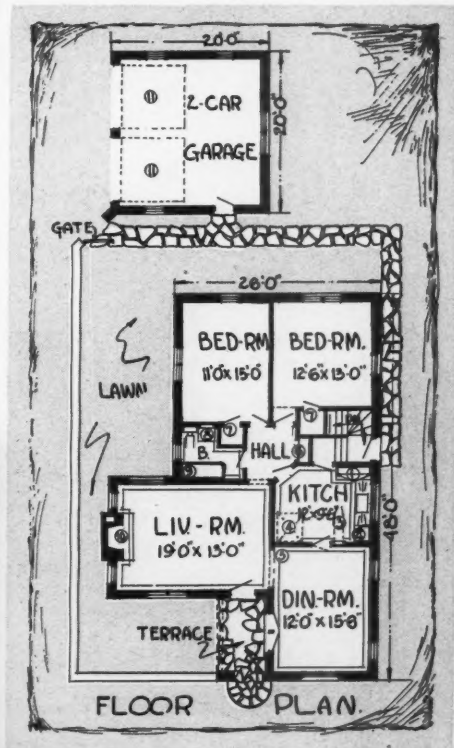
Key to Recommended Specialties of Equipment

The small numbered circles on the plans represent the following:

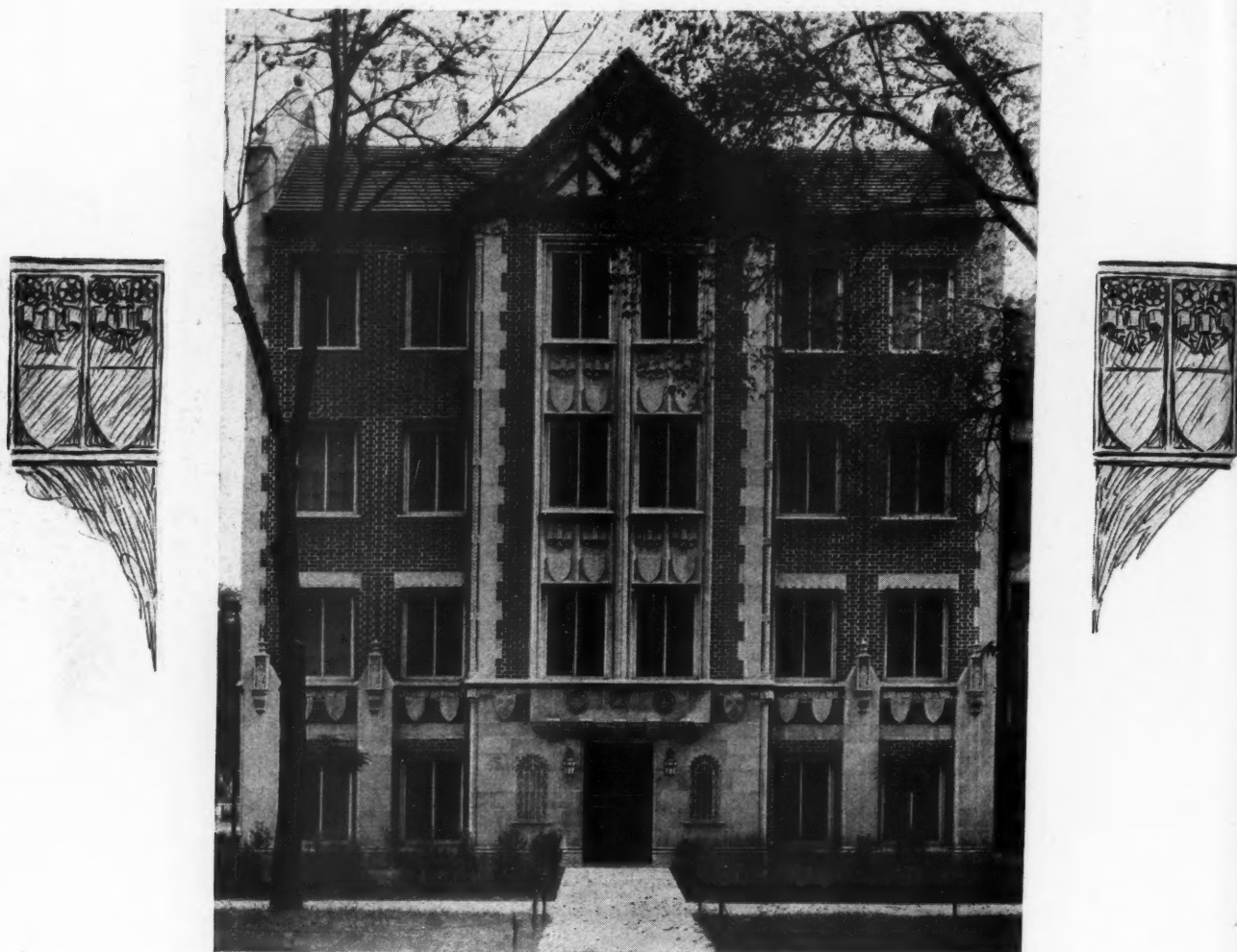
- | | |
|--------------------|---------------------------------|
| 1—Kitchen Cabinets | 7—Space Saving Closet Equipment |
| 2—Refrigerator | 8—Medicine Cabinet |
| 3—Ironing Board | 9—Tub Shower |
| 4—Range | 10—Fireplace Throat & Damper |
| 5—Thermostat | 11—Overhead Garage Doors |
| 6—Linen Cabinet | |

In addition to the above many items of modern equipment must be considered:

- Weatherstrips
- Storm Sash
- Screens
- Lighting Fixtures
- Convenience Outlets
- Electric Panel
- Washing Machine
- Ironing Machine
- Clothes Dryer
- Coal Chute
- Heating Plant
- Oil Burner
- Incinerator
- Water Supply System
- Water Softener
- Hot Water Supply
- Radiant Gas Heaters
- Electric Wall Type Heaters
- Casement Windows
- Dishwashing Sink
- Automatic Cellar Drainer
- Radiator Covers or Furniture
- Disappearing Attic Stairs

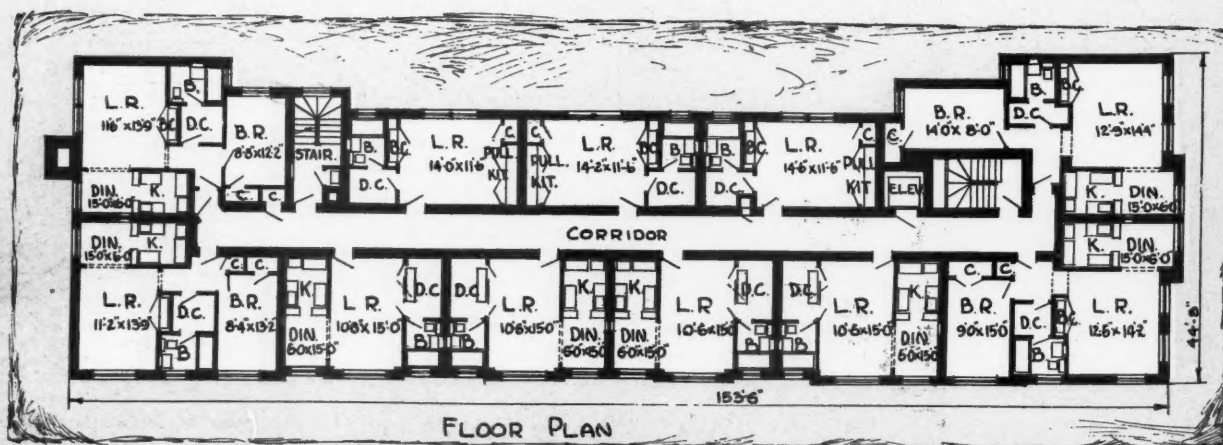


Wrought iron window guards of unique and individual pattern are effective accessories to the home of Spanish or Italian Lines.



One, Two and Three Room Units in The West End Apartments, Chicago

OLSEN & URBAIN, Architects



The ALL-FEATURE Home

COMPLETE WORKING PLANS of the MONTH'S MOST POPULAR DESIGN



English Cottage with Attached Garage Offers a Thoroughly Attractive and Modern Home for the Family of Average Size

AN exceptionally attractive house, in appearance, and an exceptionally practical house, in floor plan, is offered in the All-Feature Home illustrated on this page with complete working drawing reproduced on the four pages which follow. It is an English cottage design with exterior walls of wide, thick butted shingles, with half-timbered stucco in the gable, and with a roof of irregularly laid shingles producing a most pleasing effect.

In accordance with a rapidly developing trend in house design, the garage has been built as an attached part of the house with its entrance at the front. With a well-designed entrance and attractive garage doors, such as those used here, this does not in any way detract from the general appearance of the house and is a decidedly convenient arrangement in these days when the automobile and its use play such an important part in the daily life of every family.

The front entrance opens directly into a central hallway

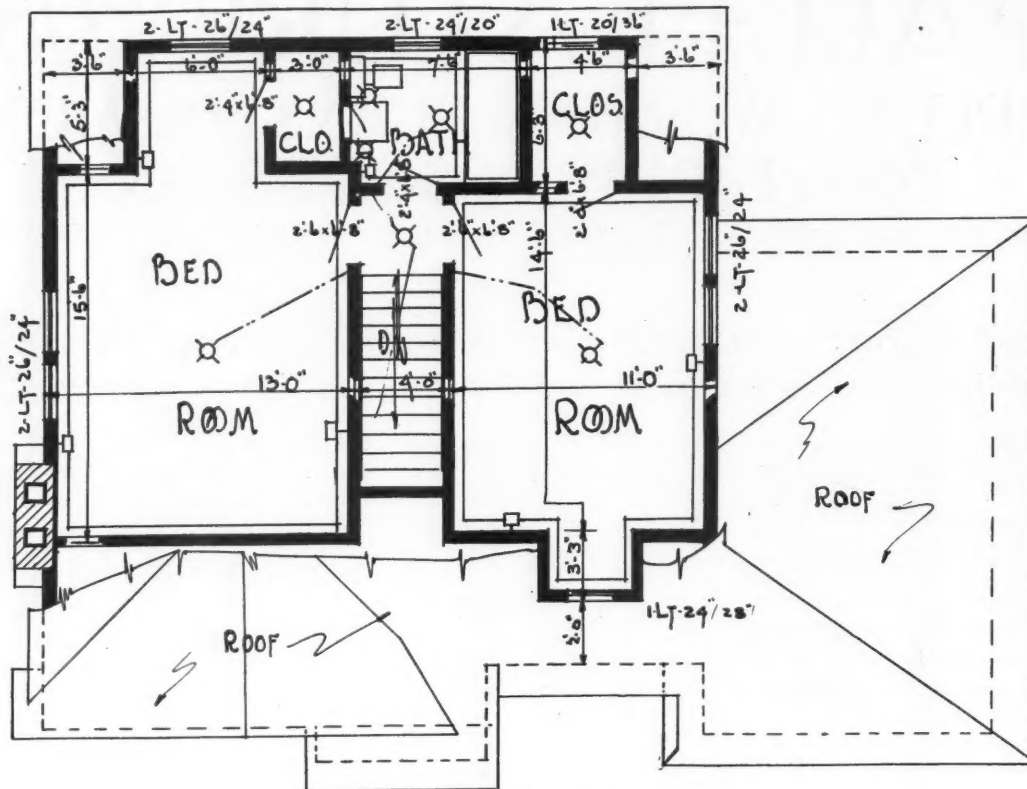
with stairs leading to the floor above. On one side of this hall is the large living room with a library at its farther end separated by French doors. From the library there is a passageway leading to the kitchen at the other side of the house. Off this passageway is a lavatory, a small closet and the stair to the basement. There is also a handy closet in the library.

The kitchen is directly back of the dining room which is on the opposite side of the hallway from the living room. It is compactly designed and fully equipped with cabinets and all those other specialties which appeal so strongly to the women. There is an outside service entrance opening close beside the rear door of the garage.

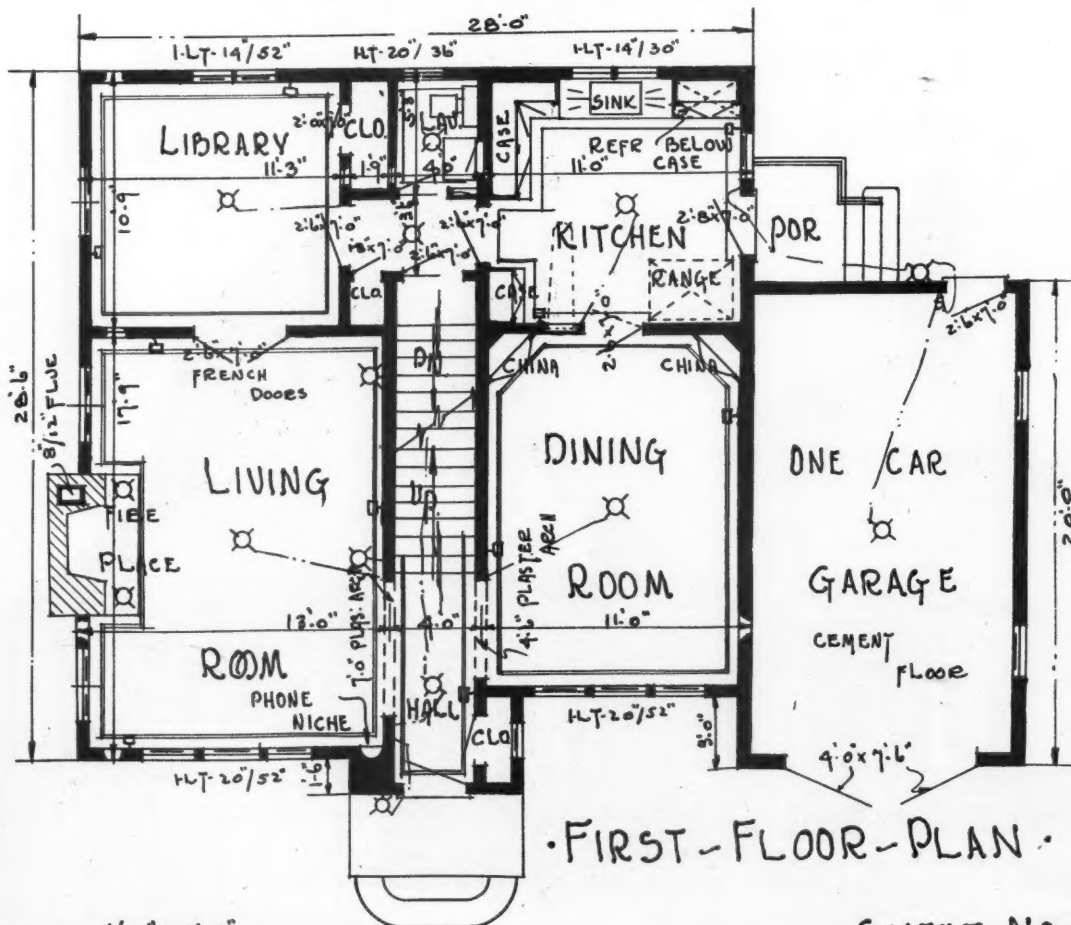
On the second floor of this home there are two large bedrooms, each provided with a closet of unusual capacity. The bathroom is placed between these two rooms with the three doors close together, an arrangement which will be found especially convenient.



A Small Home of the English Cottage Type Which Is Not Only Attractive in Appearance But Especially Well Planned as May Be Seen from the Drawing on the Pages Following This.



• SECOND-FLOOR-PLAN •

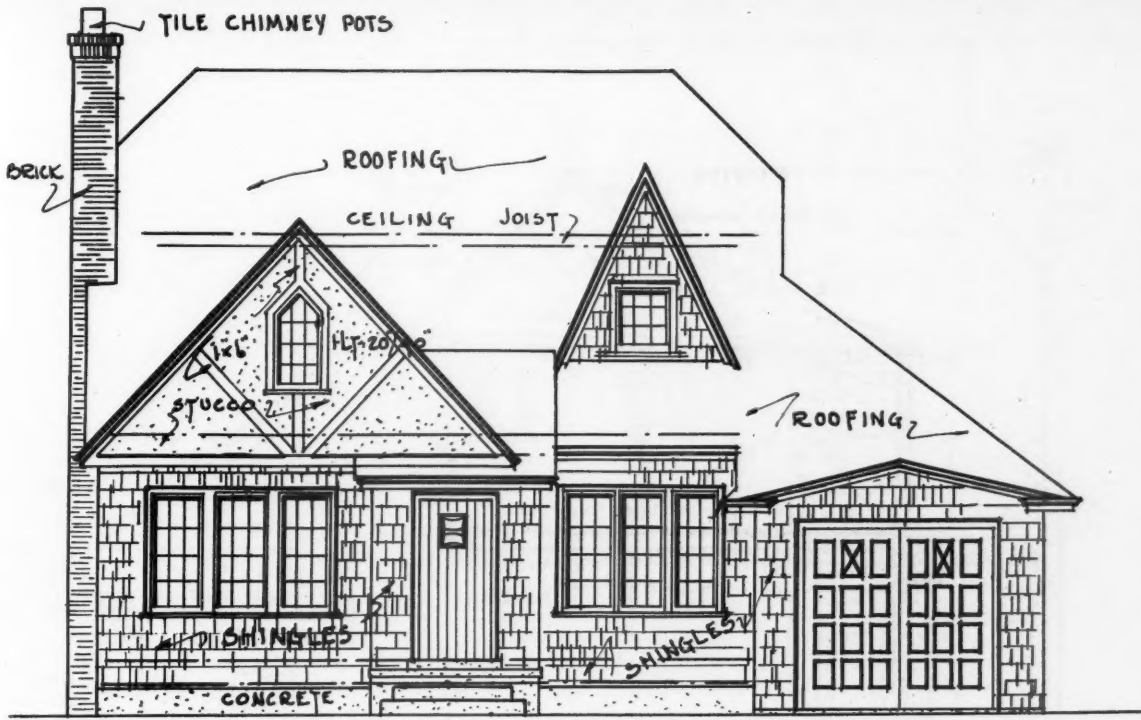


• FIRST-FLOOR-PLAN •

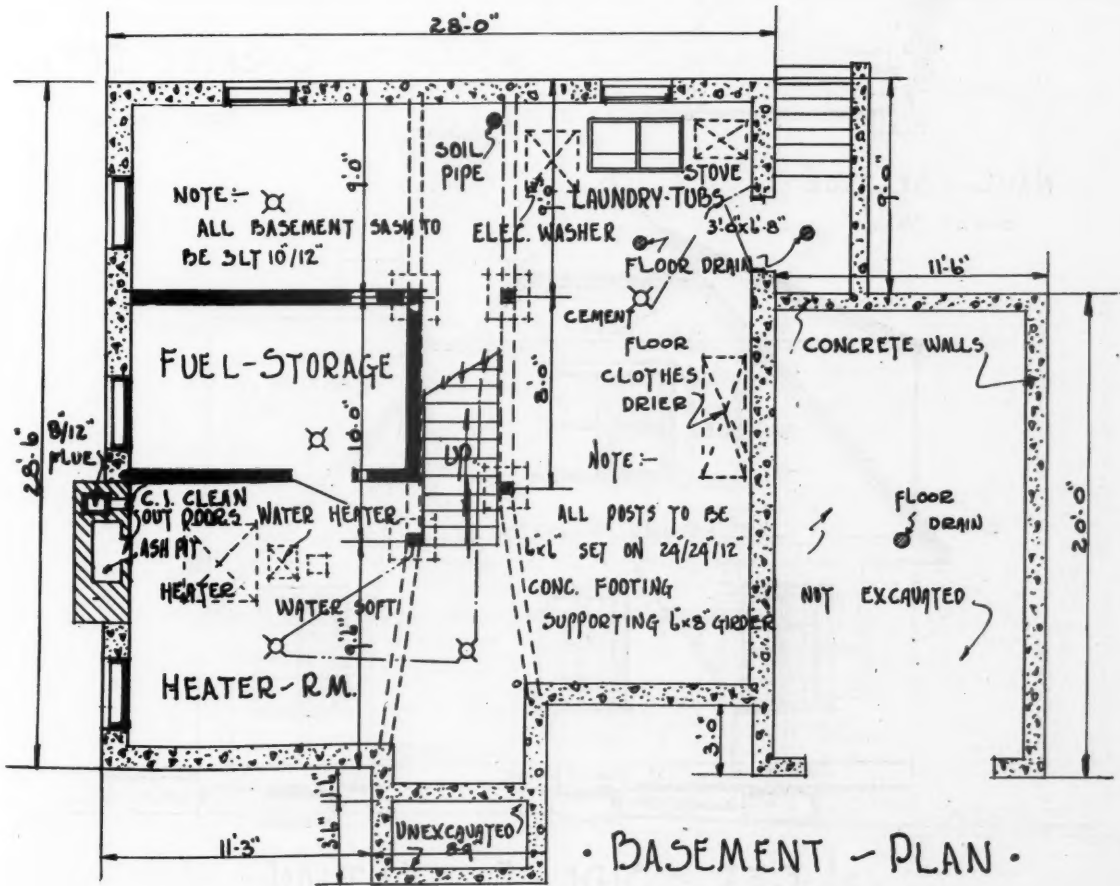
SCALE $\frac{1}{8}" = 1'-0"$

SHEET NO.-1.

Here, in Our All-Feature Home, Is Offered a Six-Room House with an Attached Garage. The library may be entirely separated from the living room and used as a maid's room.



• FRONT - ELEVATION •

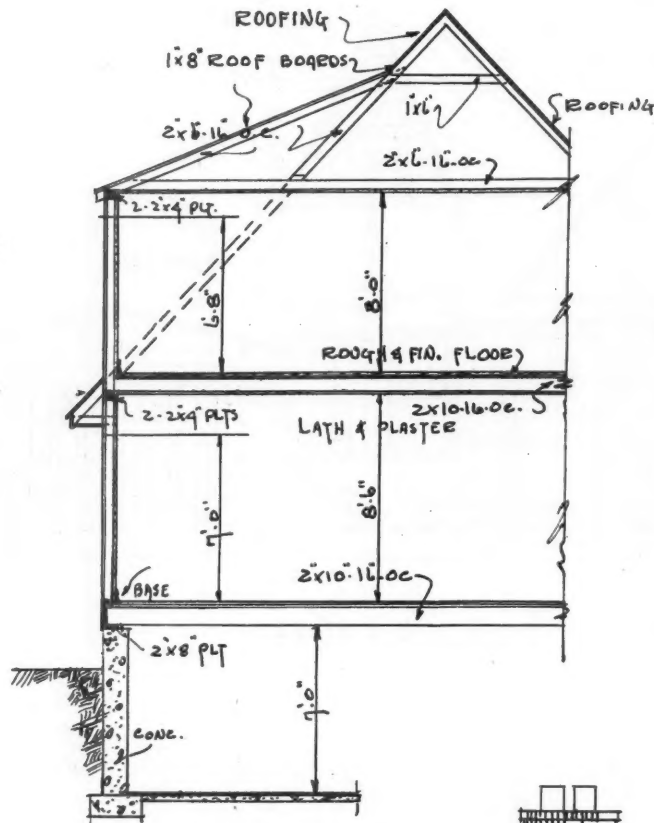


• BASEMENT - PLAN •

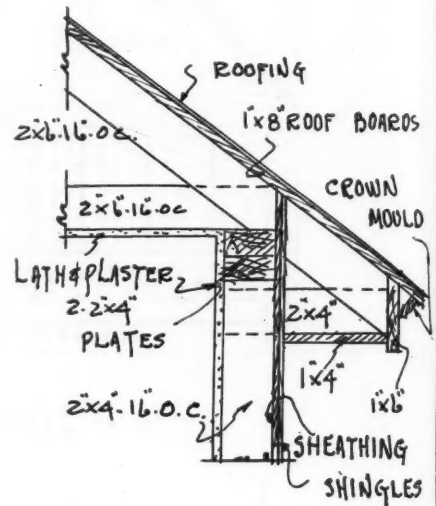
SCALE 1/8" = 1'-0"

SHEET NO. - 2.

In the Basement There Is a Completely Walled Room for Fuel Storage and a Heater Room Which Keeps the Balance of the Basement Clean and Useful for Laundry and Other Purposes.

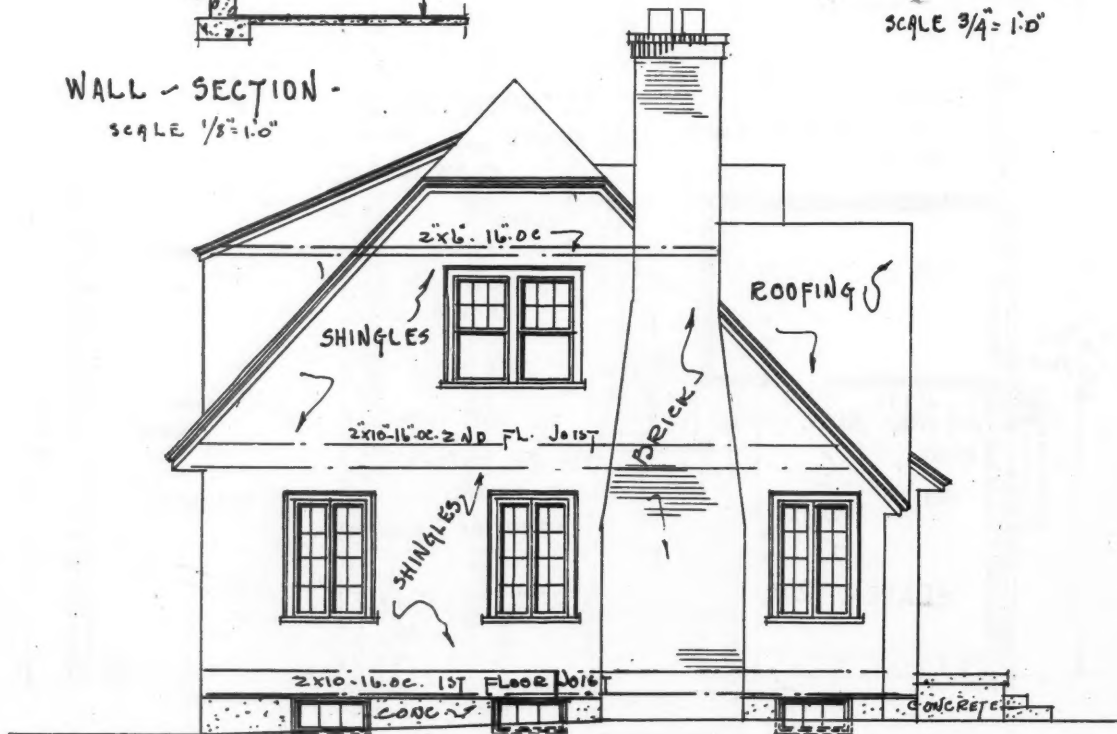


WALL - SECTION -
SCALE $\frac{1}{8}" = 1'-0"$



CORNICE DETAIL

SCALE $\frac{3}{4}" = 1'-0"$

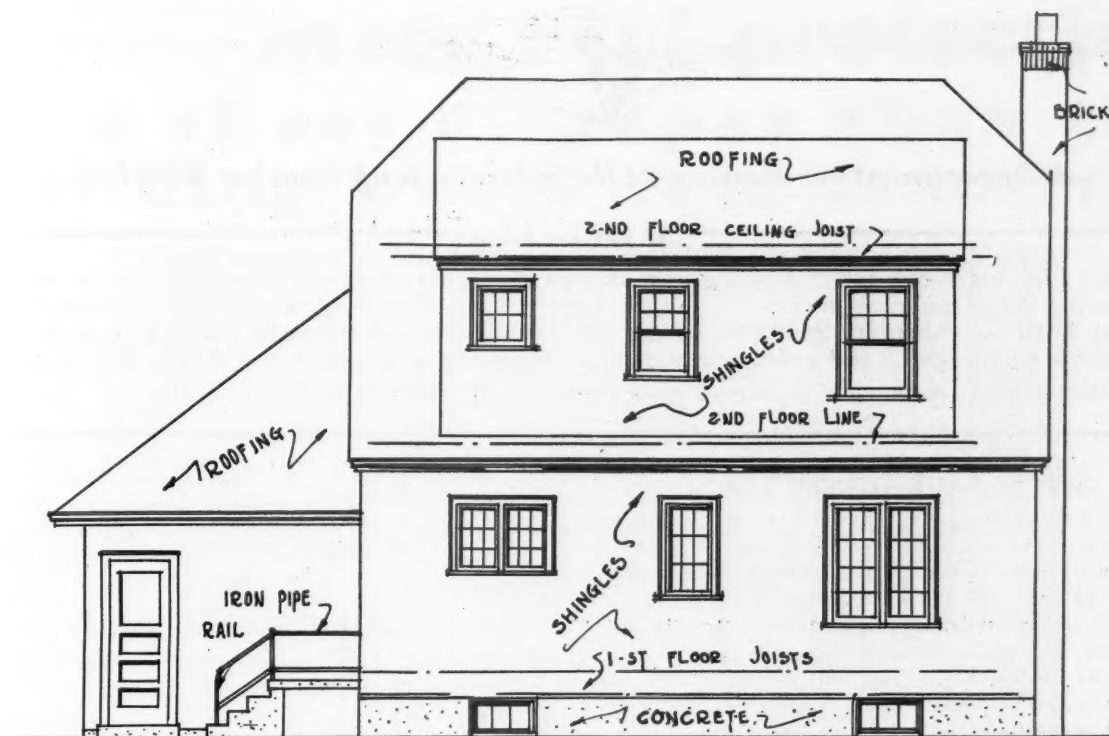


LEFT - SIDE - ELEVATION.

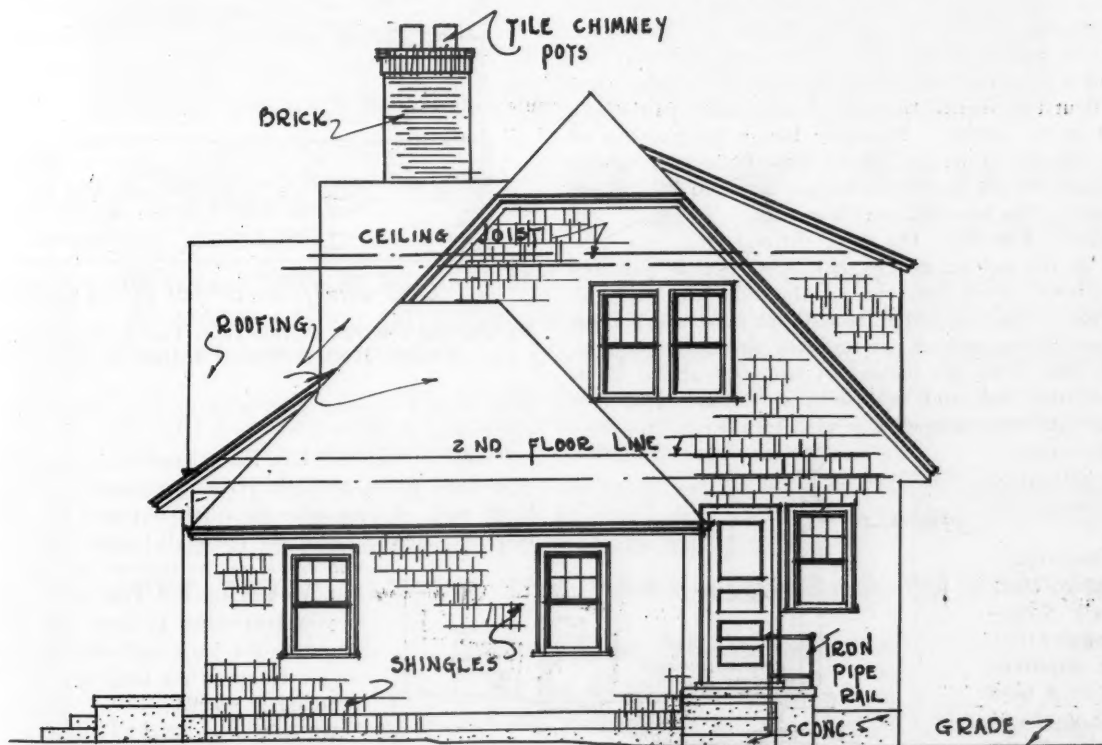
SCALE $\frac{1}{8}" = 1'-0"$

SHEET NO.-3.

The Detail Drawings on This Page Show the Construction of Our All-Feature Home While the Elevation Indicates Various Points of Exterior Treatment.



• REAR - ELEVATION •



• RIGHT - SIDE - ELEVATION •

SCALE 1/8"=1'-0"

SHEET NO-4

These Additional Elevation Drawings Complete the Story of Our All-Feature Home Which Is Illustrated by an Actual Photograph Reproduced on Page 61.

HOW DAN DOES IT



A Department for Passing "Life Savers" along to other Builders

\$2 for an Idea

Dan is an ingenious cuss. Nothing ever stumps him. He always knows the way out when he runs into a tough problem out on the job or in the office. Dan is editor of this Department and will pay \$2.00 each for every good idea he can use here to show and tell other builders "how to do it." Send him a rough sketch and a short description of what the tough job was and how you handled it. Address Dan-Do-It, care of American Builder, 105 W. Adams St., Chicago, Ill.

Septic Tank Grease Trap

IN small towns and in the suburbs and country, beyond the reach of city sewerage systems, homes are generally equipped with septic tanks. The action of these tanks is based on the action of certain germs which are likely to be killed by an accumulation of grease and soap. In order to avoid this, I planned a grease trap to be built into one corner of my basement into which all the waste must pass before reaching the septic tank. This keeps the grease out of the septic tank.

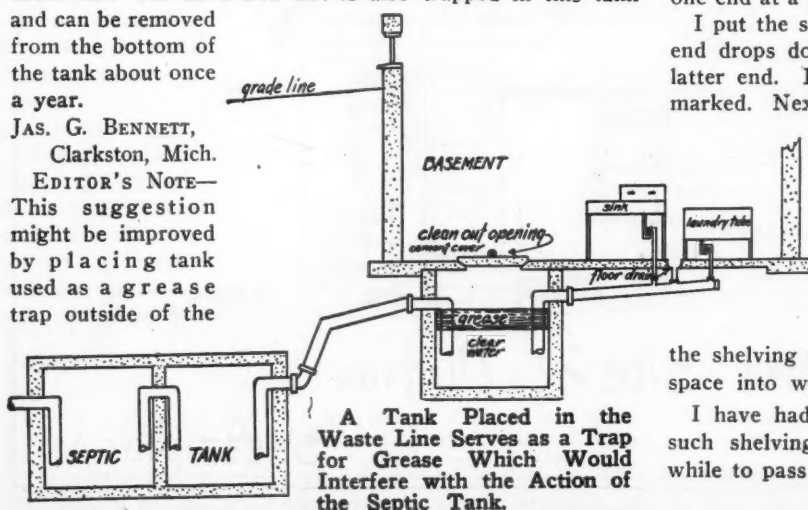
I made a cement tank below the level of my basement floor but high enough to have a flow to the septic tank outside. This tank is three feet wide by four feet long and is four feet deep. It is cemented tight on all sides and the bottom and has an opening in the top for cleaning, which is tightly closed with a lid of cement.

I placed a four inch soil pipe elbow, onto which I had worked about two feet of soil pipe, in one wall of this tank as shown in the sketch. This pipe hangs down inside of the tank. On the other end of the tank I placed a similar pipe, making it reach about two inches closer to the bottom of the tank. This was the overflow end.

The wastes flow into the tank through the first pipe and drop to the bottom of the tank. As soon as the tank fills to a level above the end of the overflow pipe, all greases rise to the top and float. About once every three months the floating greases are removed and buried outside. This also cuts down the danger of stoppage of the waste pipes from the sink and tubs because of having a very short run. All sand and dirt is also trapped in this tank and can be removed from the bottom of the tank about once a year.

JAS. G. BENNETT,
Clarkston, Mich.

EDITOR'S NOTE—
This suggestion might be improved by placing tank used as a grease trap outside of the

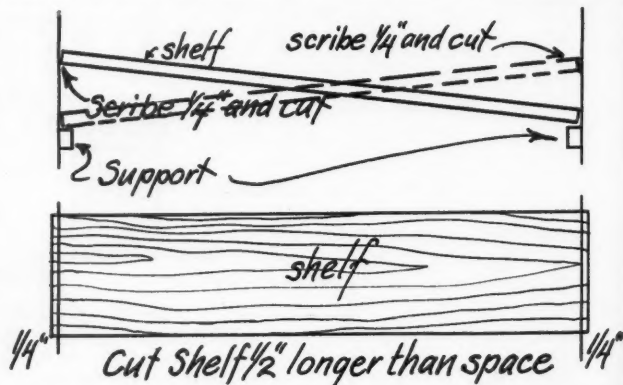


basement. Though it would require extra work sinking the tank in the ground there would be no danger of disagreeable odors getting into the basement, or even the upper part of the house, and would simplify cleaning out the tank.



To Fit Shelves Neatly

THE sketch shows my way of fitting shelving in closets and other places where a neat fit is wanted. I cut the shelving $\frac{1}{2}$ inch longer than the width of the opening, which allows $\frac{1}{4}$ inch for scribing on each side. The scribing is



By Cutting Shelves a Half Inch Too Long and Scribing as Shown Here a Neat Fit Can Be Obtained.

done with a regular pocket scriber or compass. I scribe one end at a time.

I put the shelf in place raising one end so that the other end drops down into place on the support and scribe the latter end. I then take the shelf out and cut this end as marked. Next I again put the shelf in place, with the other end down on the support and scribe it, then remove and cut it. This gives a perfect fit if you remember to keep the shelving in line with the back wall and get an accurate measurement at the longest point where the shelving is placed.

When I want to fit the back also I scribe it in the same way. If this is to be done the shelving should be a little wider than the depth of the space into which it is to fit.

I have had a number of carpenters ask me how to fit such shelving accurately, so thought it would be worth while to pass my method along.

ROY MATHA, 122 Oak St., Warren, Pa.

more insulation— more real protection in a sheet of paper than the building world ever conceived



Safekote 7-PLY Building Paper more than waterproof



In rolls, 500 sq. ft.,
36" wide.
Half rolls, 250 sq. ft.
To order,
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THE practicability of 7-PLY for every insulating and protective purpose cannot be equaled by any single sheet, duplex paper, or two-paper-reinforced combination.

7-PLY protects as long as the building stands, because the centre sheet in 7-PLY, being asphalt preserved and protected on both sides, can never rot out, dry out or disintegrate, thus insuring lifetime service.

7-PLY will not tear in the wind or thru rough handling. It handles easily on the job (one man can lay it). It costs no more than ordinary good papers. It is the supreme insulating paper of the building world.

JUST TRY 7-PLY ON THE NEXT JOB—AND BE CONVINCED

Safepack, Mills Inc.
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Lumber and Building-Supply Dealers Will Profit Greatly by Selling 7-PLY — Write for Dealer Prices

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Kindly send without obligation, full information, samples and prices on your remarkable 7-PLY Building Paper.

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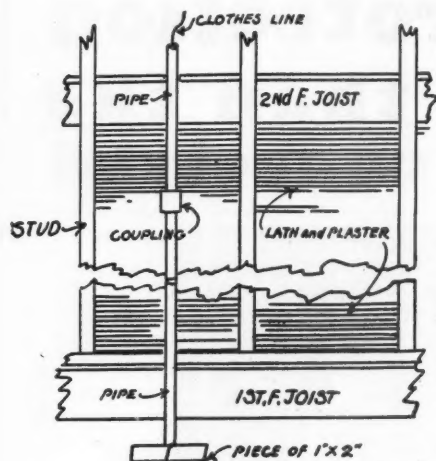
City _____

Attention of _____

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

Placing Pipe in Plastered Walls

I AM sending in a sketch showing how to put a pipe into a partition that is already plastered. By running a tape down from the upper floor to the basement you can get

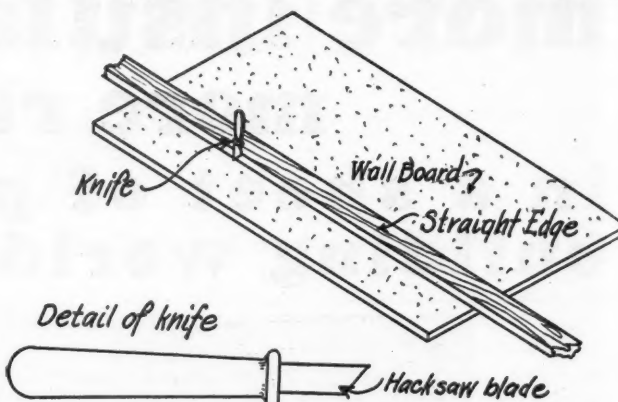


Piping Can Be Placed in Walls Without Tearing Out Plastering by Using This Scheme.

HENRY FANE, 2347 Carolina St., Chicago.

the proper length of pipe which should be in two pieces, with one coupling. Take a clothesline and run it from the upper floor to the basement and through both pieces of pipe separately. By pulling the clothesline at the upper floor the two pieces of pipe will follow and can be held in line so as to be readily coupled together.

I have made a knife out of an old hack saw blade, as shown in the sketch, which I have used for this purpose



A Knife Like This Can Be Used to Score Both Sides of Plaster Board Which Will Then Break Straight and Clean.

with satisfaction. I ground the hack saw blade so that it looked like a skew chisel and then sharpened it.

CARL J. ZIMMERMAN, Box 192, Waterloo, Ont., Can.



Better Window Casing

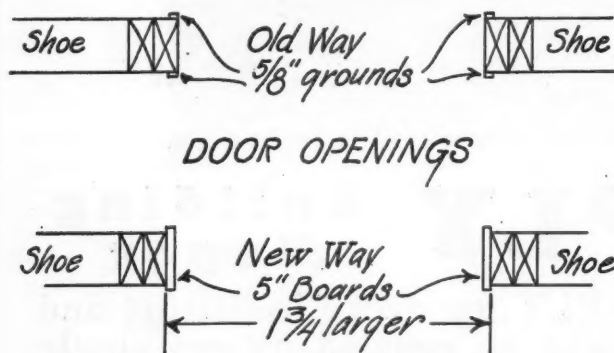
AS a building contractor I have seen a number of methods of casing up doors and windows, some better than others. Most carpenters, in casing a window, first nail the window stool in place and then nail the side casings in place, making a square cut at the top end of the casing at the proper length. When they put the head casing up, nine times out of ten, it does not fit perfectly onto the side casings. This means considerable planning before a good fit is secured. Also there is danger of the head casing being drawn loose from the side casing by the nails, leaving an open joint. I will describe a method that does away with all these difficulties.

First the window stool is fitted and stood up along the jamb, in proper position for nailing. A pencil mark is made along this casing, on the plaster, as a guide to go by in nailing on the head casing. The head casing is nailed in place. Next take the side casing and place the bottom end on the window stool in the proper place. Stand the casing up and get a point on each edge of the casing level with the bottom edge of the top casing. Any kind of small straight edge can be used for this. Mark straight across from point to point lightly and saw within about $\frac{1}{16}$ inch of this mark, leaving the casing about $\frac{1}{16}$ inch long. This will make a tight fit when pushed into place and if one is careful when getting the points on the sides of the casing a good fit is almost always sure.

ERNEST B. ROWE, R. D. No. 8, Poland, Ohio.

Providing Plaster Grounds

INSTEAD of nailing $\frac{5}{8}$ inch strips on each side of door studs to serve as plaster grounds, I make the door openings $1\frac{3}{4}$ inches wider than usual and securely nail straight



This Illustrates a Method Suggested as a Better Way of Forming Plaster Grounds Around Door Openings.

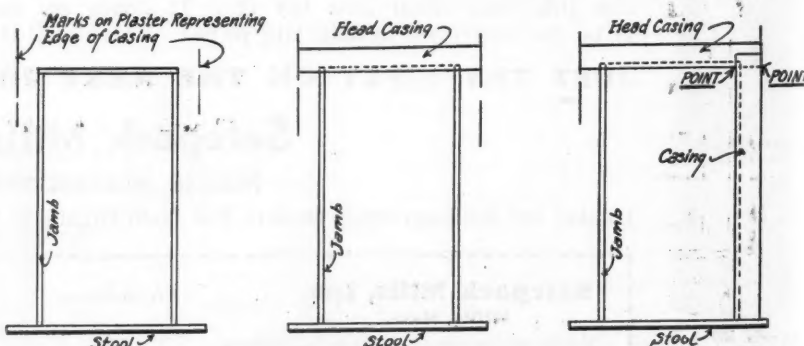
five inch boards on the faces of the studs as shown in the sketch. This gives a straight plumb wall to apply trim to later, assuming, of course, that the boards are plumb when nailed in place.

L. W. PIKE, 17 Brattle St., Brattleboro, Vt.



For Cutting Wallboard

MANY carpenters cut plaster board with a saw. This is hard on the saw and is not as fast or as satisfactory as cutting it with a chisel or sharp edge tool drawn along a straight edge with considerable pressure. When a cut has been made in this way turn the wallboard over and cut the same way on the other side after which the board will break, making a straight clean cut.



This Method of Casing Doors and Windows Saves Work in Fitting and Keeps the Head Casing from Being Pulled from the Side Casing by the Nails.



"Never before so much attention to colors"

*Johns-Manville Asphalt Shingles have
that all essential variety which the
speculative builder must have*

A RECENT issue of a leading building papersays "Never before in the history of building has so much attention been paid to colors, textures and their effect on the appearance of a building." How true this is no one knows better than the experienced speculative builder.

Yet color alone will not sell houses. It must be interesting, modern, pleasing color—and when several houses are constructed the color must be offered in variety.

Only with the Johns-Manville line can you find Asphalt Shingles that meet these requirements. We have added a complete new series of colors and combinations which will get the interest of any home seeker who sees them on a roof.

The Name helps as well as the colors

The new colors are not the only advantage to be gained by using J-M Asphalt Shingles. The Johns-Manville name is probably better known and more extensively advertised than that of any other in roofing. Show your prospects that you are using Johns-Manville Shingles and you benefit by the good-will we have built up over many years.

J-M Asphalt Shingles will give you a color range as well as the prestige due to the nationally recognized name of Johns-Manville.

We welcome inquiries from builders, and our representatives are at all times available for consultation without obligation.

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Address _____

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INSTRUCTIONS *in* ROOF FRAMING



Pitch in Roof Framing

By JOHN T. NEUFELD

FOR several numbers we have limited the discussion to framing by degrees exclusively. In these articles we have assumed that the pitch was given in degrees, in order to keep the matter as simple as possible at the beginning—that is, trying to kill only one bird at a time.

Some of the readers have asked for a fuller explanation as to the procedure when the degree of the pitch is not given. To make this matter as clear as possible, we shall try to explain the subject of "Pitch of Roofs" in detail.

Some years ago I ventured the remark that I would like to learn the carpenter trade. A farmer who heard the remark, being of the kind that looked at both sides of the dollar before spending it, thought that there was a good chance to get some carpenter labor at a reasonable price and, perhaps do me a favor. So it was that after a few weeks he told me to come on the job, which I prepared to do, my father supplying me with a saw, square and hammer, and how scared I was.

One of the first things (new) that I heard was something about $\frac{1}{2}$ pitch. That was something, of course, that I could not expect to learn very soon because, according to the mystery that was always attached to roof framing, I expected this to be too deep for me. Well, I found out later that this meant nothing more or less than that the roof was $\frac{1}{2}$ as high as wide. There is nothing mysterious about that. The thing to bear in mind is that the total width of the building is taken into consideration. This pitch is sometimes confused with road grades, which are expressed as a ratio of the rise to the run or base, thus a five per cent grade may denote a five-foot rise in 100 feet.

We have, however, a method that is similar to the method of expressing a road grade; this is the method of expressing the rise per foot run. Thus a roof may have a 6-inch rise per foot run, or a 7-inch rise per foot run, as the case may be. Note here we take into consideration the run and not the width or the span as in the first case. The third method to be mentioned is describing the pitch by degrees; this seems to be the least confusing.

For review we repeat that a degree is $\frac{1}{360}$ part of a circle. A right angle is one-fourth of a circle or 90 degrees. The table in Fig. 2 shows the different methods of expressing pitches, side by side. Note that the first method is all right in certain cases, but in some cases it runs into odd fractions such as $11/24$. Note also in the third column, headed "Pitch by Degrees," there are two figures, the first expressing the degrees and the second the fractions of a degree called minutes. (One degree is divided into 60 minutes and one minute into 60 seconds.) However, we do not have to worry about these very much, it being seldom necessary to work to such precision in

carpenter work. If the protractor is set at the degree, or at the most to the half degree, the result will be as accurate as the average mechanic will cut.

A Problem in Pitches

The roof shown in Fig. 1 has three different pitches. The pitch of each part is given in inches per foot run. See Fig. 3.

Figs. 4 and 5 illustrate what the pitch would be if expressed as a ratio of the rise to the span as in the first method. In this case the actual span of the building cannot be taken, but an assumed span is taken which is twice the run.

Fig. 6 shows the same roof with the angles expressed in degrees. Here we again show how to find the angle for the upper end cut when the lower angle is given. The two angles together must equal 90 degrees. Therefore, when the upper cut is to be found, we subtract the degree of the lower angle from 90 degrees. See Fig. 6.

To change from one pitch to another—that is, to find the degree of pitch when the pitch is expressed in any other way—requires a table, either a roof framing table or a trigonometry table. There is no mathematical way of figuring this without the use of the table. A roof framing table giving both the degree and also the rise per foot is most convenient. If a trigonometry table is used then the rise must be divided by the run. This gives what is termed the tangent, and by looking in a table of tangents we can find the angle. Thus, if the rise is $7\frac{1}{2}$ inches per foot we divide $7\frac{1}{2}$ by 12 and have 0.625 as the tangent. Looking in a table of tangents we find this to be the angle of 32 degrees, which also checks with the roof framing table given.

Note also that this 0.625 is the rise per foot expressed in feet. Therefore, the tangent of the angle is the same as the rise per foot expressed in decimal parts of a foot.

The mechanic, however, does not need to use a trigonometry table for his roof framing. A table such as shown on the opposite page is all that is needed. Similar tables will be given for hip roofs later on.

The next article will be on a slightly different subject, but should be of interest to all builders. It is a problem sent in by a reader. Do not fail to look for this.

Problems

- (1) Write in three ways the pitch of a roof with a 30-foot span and a $7\frac{1}{2}$ -foot rise.
- (2) Write in three ways the pitch of a roof having a total rise of 8 feet and a rafter run of 8 feet.

(Continued to pages 72 and 74)



...leadership that goes far beyond mere marketing

IT can truthfully be said that The DeVilbiss Company expends a far greater effort in originating, developing, and perfecting spray painting and spray finishing systems than it does in merchandising them.

This organization has never ceased to consider that its product is one of the *tools* used in the craft, business, or industrial operation of the user, and it consistently adheres to the policy that its first obligation is to assure satisfactory results from the use of a DeVilbiss System or any part of it.

DeVilbiss Systems are bought rather than sold. For intelligent painters and finishers remember that the worth of a spray system is expressed in the economy of time, materials, and labor which it renders, and the character of the result which

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If you want to know what can be accomplished in your business by a properly designed spray system we will gladly tell you without cost or obligation to you.

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Spray guns of various types and sizes
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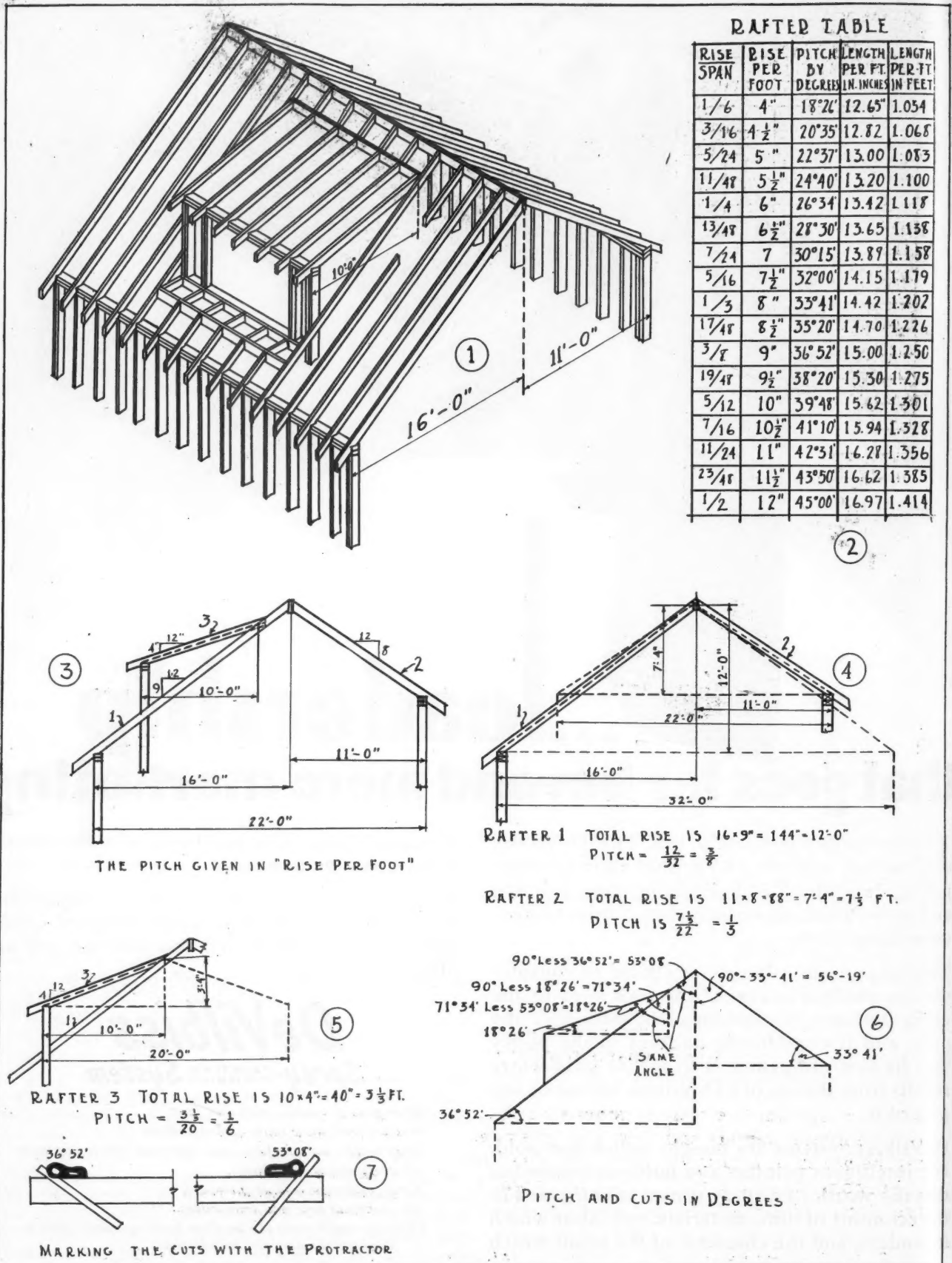
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WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER



These Drawings Explain in Detail the Subject of Pitch in Roof Framing as Expressed in the Relation of Rise to Span, the Rise Per Foot Run and in Degrees, with a Simple Rafters Table Applied to All Three Methods.

For explanatory text see pages 70 and 74.

This New, Easy Blue Print Way Prepares You for These 9 Big Pay Jobs !



1 Building Superintendent \$5,000 to \$12,000

2 Building Inspector \$4,800 to \$8,000

3 Appraiser \$6,000 to \$10,000

4 Material Buyer \$5,000 to \$7,500

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Make \$4,800 To \$12,000 A Year !

HAVE you ever stopped to consider what stands between you and a big-pay job? Simply a lack of training on the "Headwork" side of Building and Contracting—that's all! The men who command the high-salaried positions know how to read blue prints—how to lay out and run jobs.

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Get This Big-Pay Training

The day when a tradesman could get practical "headwork" training only on the job is gone forever. The records of thousands of Chicago Tech graduates have proved that the idea is no longer true. That it's easy to learn how to read blue prints by the Builders' Course, the "Blue Print Way to Big Pay." This practical method is quick, easy and it's certain. You learn right

at home in your spare time with real blue prints and lessons as simple and easy to understand as a story book. Everything is explained in every day language and worked out by practical, experienced building experts. No text books. No grinding study. Simple as A. B. C.

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Visit our big day or evening school attended by over 1,000 builders. You get this training at home by mail—same plans, lessons and instructions.

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WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

Instructions in Roof Framing

(Continued from page 70)

(3) Assume that rafter 1 in Fig. 1 had a total rise of 13 feet 4 inches. Give the pitch in three different ways, also the length of the rafter and the cuts of the rafter in degrees.

(4) What is the rise per foot run and the pitch in degrees for each of the following roofs: A $\frac{5}{16}$ pitch roof? A $\frac{1}{2}$ pitch roof?

(5) Give the degree for the top and bottom cut for a rafter having an 11-inch rise per foot.

Answers

(1) The pitch for a roof with a 30-foot span and $7\frac{1}{2}$ -foot rise is $\frac{1}{4}$ or 6-inch rise per foot, or $26\frac{1}{2}$ degrees.

(2) The pitch is $\frac{1}{2}$, or 12-inch rise per foot, or 45 degrees.

(3) This may be worked in several ways, we may divide the total rise by the total span, which in this case is $13\frac{1}{2}$ by 32. This, however, is not very convenient, so we rather change the 13 feet 4 inches to inches—this is 160 inches. The run is 16 feet. The rise per foot run is $160 \div 16 = 10$ inches.

It is, therefore, a $\frac{5}{16}$ pitch rafter, or has a pitch of 10-inch rise per foot run, or 39 degrees and 48 minutes, say 40 degrees.

The length per foot run is 15.62 inches. The run is 16 feet.

The length is 16×15.62 inches = 249.92 inches.

To change to feet divide by 12.

$249.92 \div 12 = 20$ feet and 9.92 inches.

The .92 inch should be changed to sixteenths of an inch. This is done by multiplying by 16, thus $.92 \times 16 = 14.72$ sixteenths, or say $\frac{15}{16}$.

The complete answer is 20 feet $9\frac{15}{16}$ inches.

The lower cut is 40 degrees, the upper cut must be 90 less 40 = 50 degrees.

(4) A $\frac{5}{16}$ pitch roof has a $7\frac{1}{2}$ -inch rise per foot and a 32 degree pitch. A $\frac{1}{2}$ pitch roof has a 10-inch rise per foot run and a 40 degree pitch.

(5) Bottom cut, $42\frac{1}{2}$ degrees. Top cut, $47\frac{1}{2}$ degrees.



Home Modernizing

(Continued from page 52)

These are only a few of the various ways in which homes can be modernized. There are many other things which will suggest themselves, naturally, to the owner, or to the architect or contractor who may be called in, when such plans are being considered. Casement windows, interior trim, floors, stairways, kitchen cabinets, hardware and numerous other things may be changed in such a way as to bring the house entirely up-to-date and increase its utility and enhance both its exterior and interior beauty.

Building and loan associations are particularly interested in home modernizing because it enables them not merely to secure additional loans, but more especially because of its effect upon the general prosperity of any community, and the impetus which it gives to community development. The removal of "sore spots" through the modernizing of old homes is a boon to any community. It tends to increase general property values and creates a greater civic pride. The additional employment offered to building trades, as well as increasing business for dealers in building materials and equipment, reflects upon business conditions throughout the town or city and are alike beneficial to those directly involved as well as to merchants, professional men and others.

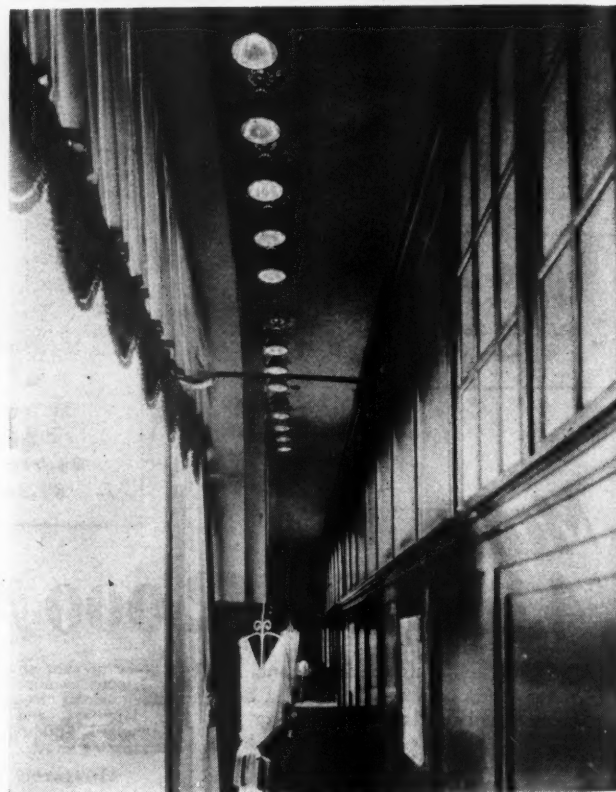
Because of their rapidly increasing resources, building and loan associations are in an extremely good position to finance home modernizing. Local associations everywhere are glad to talk with home owners and builders about their modernizing problems.

Flood Lighting in Changing Colors

(Continued from page 44)

white; (9) white interval; (10) white to green; (11) green to white; (12) white to red and blue; (13) red and blue to white; (14) amber interval; (15) amber to blue and green; (16) blue and green to white; (17) white to green and red; (18) green and red to white; (19) white interval; (20) white to amber and green; (21) amber and green to white; (22) white to moonlight and blue; (23) moonlight and blue to white and then to amber; (24) amber interval; (25) amber to red, blue and green; (26) red, blue and green to white; (27) white to amber, green and red; (28) amber, green and red to white; (29) white interval; (30) white to red.

The control apparatus and dimmer operate entirely automatically, being started out at a predetermined hour by a time switch.



Lighting for Second Floor Display Windows in the McClatchey Building.

So far as the authors are aware, this is the first time that anything so elaborate in the way of mobile or changing colors in a building exterior has ever been applied. The Edison Building in Philadelphia was the first application of changing colors to a large, modern skyscraper, but on the Edison Building, any one elevation has only two flood-lighting systems in operation at one time, namely, a color system consisting of one or two colors in constant operation, and a white or unmodified lighting system, connected in on the cycle dimmer. As previously explained the McClatchey Building employs six complete lighting systems, and the present arrangement involves thirty changes. A study of the above schedule will indicate that still more combinations could be worked out, but the authors felt that thirty changes is sufficient to provide adequate variety.

This installation should prove of particular interest to central station men, because it proves that elaborate mobile color installations can be sold to hard-headed, practical business men. There is only one reason why a business man may be induced to spend his good money for mobile color lighting of the exterior of his building, and that is that it pays.

MONEY-MAKING OPPORTUNITIES

ARE EVERY-DAY OPPORTUNITIES

FOR EVERY OWNER OF AN AMERICAN HIGH PRODUCTION FLOOR SANDER

NO other floor sander offers you these same opportunities, because no other sander can do for you what this wonderful New One Man Floor Sander can, and there are definite reasons why.

BECAUSE

It is a **ONE MAN MACHINE** for any size job.

It actually **DOES DOUBLE THE WORK** of any other Floor Sander made, barring none.

It has no equal as a producer of both **QUANTITY** and **QUALITY** of WORK.

BECAUSE

It is radically **NEW** and **DIFFERENT** both as to **DESIGN** and **OPERATION**.

It has **NO CHAINS**, **NO SPROCKETS**, **NO BELTS**, and **PICKS UP EVERY SPECK OF DUST**.

It is constructed almost entirely of **ALUMINUM** and is properly proportioned as to **SIZE**, **SPEED**, and **WEIGHT**, so as to insure constant, uniform and continuous High Production year in and year out. Our "On Approval Plan" offers you an opportunity to "Try It Before You Buy It."

AND THESE FACTS

If the **AMERICAN HIGH PRODUCTION** Floor Sander were not large enough, were not of the proper size, and were not equipped with a **MOTOR OF SUFFICIENT SIZE AND POWER** to really surface floors on a **HIGH PRODUCTION** basis, it would not be necessary to remove the quick, detachable motor in order to be easily carried by one man.

But were it not of the exactly proper **SIZE** and **POWER**, you would not be interested in it as a **PRACTICAL** sanding machine. By the same token **NO OTHER** sander without a sufficiently large and powerful motor should interest you.

The practicability of any sanding machine is dependent upon its production and money-making possibilities. Here is a machine which has both of these and in a far greater proportion than any other.

A PRODUCT OF

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"EASILY CARRIED BY ONE MAN"



First Analyze and Plan Then Build and Sell

(Continued from page 49)

materials and a cost basis for purchasing his material and procuring his labor. By this method of estimating, the superintendent in charge is dealing with units of work instead of units of money. It has been found practical to hire workmen with an understanding of output in their respective lines of craftsmanship. Labor is then hired on an intelligent basis of output instead of just for a job. It has been found that workmen become interested and strive to deliver a normal output when they are hired with this understanding. Their attitude is changed to interest in the work they are doing.

To control output it is necessary to have a time-keeping system in which each workman keeps his own time. The workman's time card is prepared in such form that in filling in his time card he records the amount of work he performed that day. This brings to his attention each day whether he has delivered what he agreed to, when selling his services. The housing engineer in giving this service to the contractor, to the workmen, and to the material men, is acting in the interest of his client, the owner, and better construction results.

The housing engineer must further be prepared to provide the contractor with a method for handling his operation, to guide him to the best sources of supply for the materials specified, and to arrange his field organization. Also to prepare a schedule by which he is guided to complete his contract on time. To have a comprehensive, workable schedule in a housing operation is of great importance to the owner, and in financing to provide the funds to carry on the contract work, so that completed portions are available for returns in the investment at given dates. The schedule is the means of keeping all interested parties fully informed, thus satisfying the owner, the contractor and the engineer to the extent that it minimizes quibbling over things they fear might go wrong, or that have gone wrong. It serves as a record, showing whether the work is up to date, and in almost every instance has been the means of completing contracts on time, when otherwise they might have been delayed two or three months, as contractors when well into the work get lost in the volume of details which at this stage are of magnitude in controlling and handling the operation.

The schedule is a guide to the general superintendent in following the condition of his work, and the progress he is making each day. It also acts as a stimulus to the workmen. They become interested; the reaction with most workmen might be compared with a game, which is not interesting unless a score is kept—so the chart seems to serve as a score card, or record of what they are really doing, and we find workmen interested in their work if hired on a basis of understanding.

Home Ownership and Sales

The housing engineer cannot consider his work finished on a project, at the completion of the houses and improvements. The system under which he works, deals with all the principal factors underlying commensurate housing, and he is thoroughly capable of assisting in promoting home ownership and effecting sales on the most prudent basis. In this the potential home buyer must be given information dealing with his problems from its inception to the actual purchase and occupancy of the home, including a plan from which to study his income and obligations in relation and with benefit to the home purchase allowance. Properly guiding the individual at the beginning in an understanding of home ownership is so vital in effecting sales on a sound basis that it is best served by providing the prospective purchaser full information on the subject

how to go about building and paying for a home. The prospective purchaser should be assisted in approaching home ownership with a full understanding of his income and obligations. That is, to estimate in detail and control living expenses by the budget system. The author has originated a simple form of listing family living expenses, with the aid of which detailed expenses of the family budget can be studied to the benefit of a home purchase allowance. Items of household and living expenses of the average family are:

1. Food,
2. Clothing,
3. Household furnishings and supplies,
4. Fuel and light,
5. Water,
6. Doctors,
7. Schools and churches,
8. Entertainment,
9. Contingencies,
10. Monthly payments on the home.

Knowledge of monthly expenditures of these items have been of great value in guiding prospective home purchasers with safety and confidence. For instance, Item 8, the amount spent by the average family for entertainment and recreation which is quite necessary and of importance, but few have a knowledge of the monthly expense for personal hobbies, movies, theaters, social functions and the cost of operating a pleasure automobile. Also Item 9, under the heading of contingencies include these expenditures that come to every family as unforeseen obligations.

The housing engineer in developing all of the basic facts underlying housing brings about better co-ordination between the production and sale of houses, sales plans, and intelligent sales effort.

When sales of homes have been made to the purchasers the seller has an obligation in guiding the home purchasers in a correct understanding of tenure and ownership. In other words, we might express it more accurately by stating the developer and seller of homes should obligate himself to service home ownership, as has become a profitable practice in the manufacture and sale of other commodities. This is especially true where a new community is being developed, bringing about the mixing and mingling of a group of home owners who have something in common, and it must then become a recognized fact that at this stage of the procedure the home purchaser has in reality become a partner with the seller, the builder, and the financial interests all connected with the enterprise. Well formulated plans for servicing the home purchaser may be followed to good advantage by all interested parties.



Merger Is Announced

A RECENT announcement states that, effective January 1, 1929, the Spray Engineering Company and the Spraco Painting Equipment Company will be merged and will continue to do business thereafter under the name of Spraco, Inc., organized under the laws of Massachusetts, with new offices and factory facilities combined at 114 Central St., Somerville, Mass.



Fuller & Johnson Reorganized

CONTROL of the Fuller & Johnson Mfg. Co., of Madison, Wis., has been purchased by the Second Ward Securities Co. and the Quarles Co., of Milwaukee. The company has been reorganized, additional capital has been supplied and ownership is in a group affiliated with the investment houses mentioned and with the management of the company. The officers of the company remain unchanged and a policy of sales expansion will be followed.

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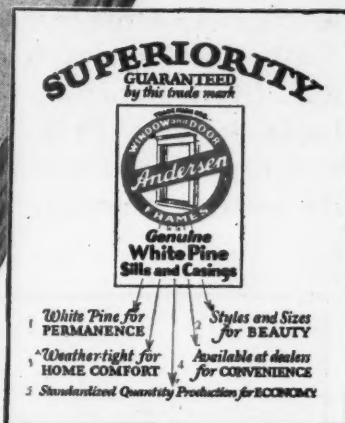
You can't control Heat Loss...unless window frames are Weather-tight

Insulation or weatherstrips can't be effective if drafts creep in around the windows. Leakage between sash and frame is easily stopped after the building is complete, but leakage around the window frames can be prevented only by proper installation of weather-tight frames.

Do you know that the Andersen stock frame has patented features which enable builders to secure a perfectly tight

joint at a low cost? (See detail illustration below) Besides, in these frames accurate milling insures joints that always fit snugly. This accuracy also saves labor time and money. No refitting is required.

If you don't know about Andersen Frame 5-point superiority and how these frames can help contractors to build a reputation, write us for descriptive folders and the name of your nearest Andersen dealer.

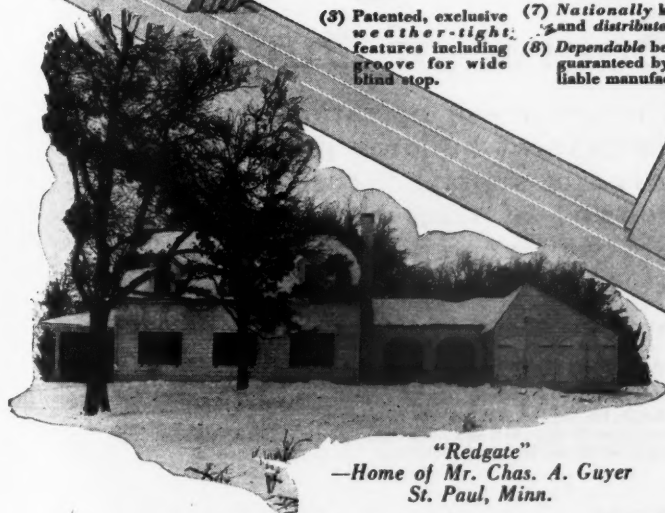


Why Contractors use Andersen FRAMES

- (1) Patented, noiseless, long wearing Andersen pulleys used exclusively.
- (2) Genuine soft White Pine sills and casings—last a life-time.
- (3) Patented, exclusive weather-tight features including groove for wide blind stop.
- (4) Absolute accuracy of milling.
- (5) A Frame up in 10 minutes.
- (6) Standardised styles and sizes, convertible for all architectural needs.
- (7) Nationally known and distributed.
- (8) Dependable because guaranteed by a reliable manufacturer.



The enlarged detail above illustrates how the Andersen patented groove permits the use of ordinary D & M flooring for a wide blind stop. This makes a weather-tight joining of frame and wall.



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—Home of Mr. Chas. A. Guyer
St. Paul, Minn.

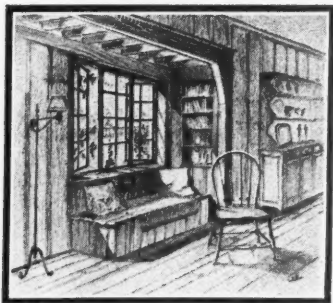
Andersen Frames No. 101 installed with wide blind stops.

Andersen FRAMES

Andersen FRAMES are manufactured by ANDERSEN LUMBER CO., Bayport, Minn.

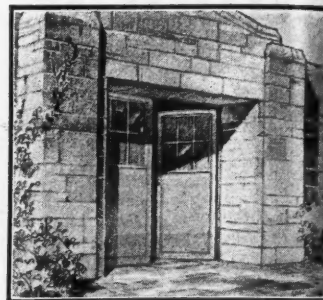
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Standard Steel Products for Permanent Construction

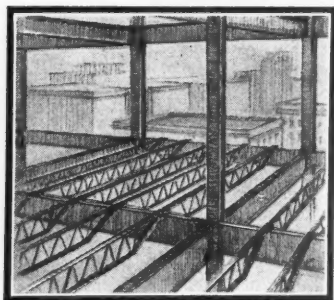


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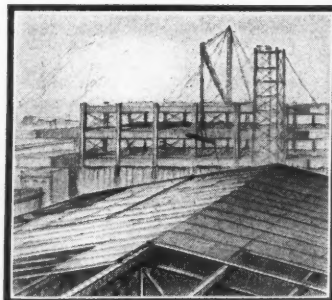
The builder's demand for better and more economical construction is met by Truscon with quality products for every type and size of building. Included are complete lines of Steel Windows, Metal Lath, Steel Joists, Reinforcing Steel, Steel Doors and Steel-deck Roofs. Superior in design and workmanship, their efficient manufacture assures economy of cost.



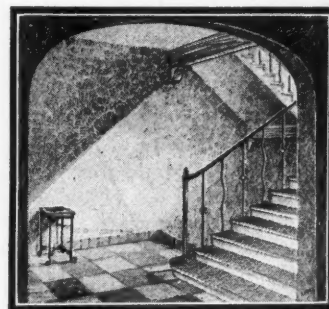
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Truscon Metal Lath—"A" Laths, $\frac{3}{8}$ " and $\frac{1}{2}$ " Hy-Rib, Diamond Lath, Rib Lath, Sheet Lath, Corner Beads, Channels and Metal Trim.

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THE SECRET



OF PERFORMANCE

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE

"Wood is the Right Material

for these
Houses,
MR. SPALDING"



The designers of these Colonial houses, Architects Small House Service Bureau, insisted that wood was the material to be used throughout

How the Builder Benefited by the Designer's Insistence on Wood...



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"Wood construction throughout made it possible for us to erect the job quickly and economically. We should be able to sell them at an attractive price and make a good profit.

"But the important thing for us was the fidelity with which we were able to follow the architectural treatment. We would not have been able to keep the true Colonial spirit had we attempted to use any other material — nor would we have saved on erection costs.

"As it is, we had a group of houses that brought us the type of buyers we wanted. Without a cent of added cost, wood gave us a real selling point in the perfect execution of the popular Colonial design that it makes possible."

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If you want ready assurance of standard quality... lumber plainly printed with the mark of the expert grader... look for the grade mark on each board.

This quality lumber can now be had in every species. A larger supply will be available as consumers get accustomed to looking and asking for it when they buy. Inquire of your local dealer. If he cannot supply you write and give us his name.



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Five advantages over every other stained shingle

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- 2 CONSTANT AGITATION. Patented beaters washing this hot stain back and forth—keeping the color pigment in solution.
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Creo-Dipts *now stained under pressure by patented process*

AS every builder knows, stained shingles have always been *dipped* in the stain—a primitive, clumsy method at best.

Now Creo-Dipt has perfected a startling improvement. Creo-Dipts are *stained under pressure*—submerged in heated, agitated stain, while compressed air forces preserving oils and colors into the shingles.

A tremendous advance! Improvements that took Creo-Dipt engineers five years to perfect—that add many thousands of dollars each year in manufacturing expense. And yet Creo-Dipts—pressure-stained—come to you at exactly the same price as before.

We should like to mail you *free*, our regular 25c portfolio of photographs of Creo-Dipt homes, together with some interesting examples of new roof treatments and old homes rebeautified with Creo-Dipts laid right over the old siding. Also we want to be sure that you have an up-to-date color booklet showing the wide range of Creo-Dipt colors. Won't you write us today for anything you need.

Creo-Dipt Company, Inc., 1451 Oliver St., No. Tonawanda, N. Y. In Canada: Creo-Dipt Company, Ltd., 1610 Royal Bank Bldg., Toronto, Ont. Factories: No. Tonawanda, N. Y.; Kansas City, Mo.; Minneapolis, Minn.; Vancouver, B. C. Sales Offices in principal cities. Look for *Creo-Dipt* in your phone book.

CREO-DIPT

Stained Shingles

STAINED UNDER PRESSURE

FOR ADVERTISER'S INDEX SEE NEXT TO LAST PAGE

© C-D Co., Inc., 1929

NEW... and Better!



**Agents
and Distributors
Wanted**

Write today for open
territory and details of
this new profit-making
proposition.

The only BALL
BEARING slide
saw on the market.

A portable electric Woodworker at a price that will surprise you

An entirely new device that does everything high-priced woodworkers can do . . . yet has none of their disadvantages. Flexible knee permits saw to tilt at any desired angle. Firmly attached to the steel slide . . . no possibility of wobble or vibration to mar accuracy of work. Slides smoothly and easily on ball bearings. No belt . . . tools are mounted on motor shaft. Direct drive doubles power.



Furnished with steel frame
and carrying handles
or with table shown above

The Greyhound Slide Saw

Ripping
Cross-cutting
Beveling
Mitering

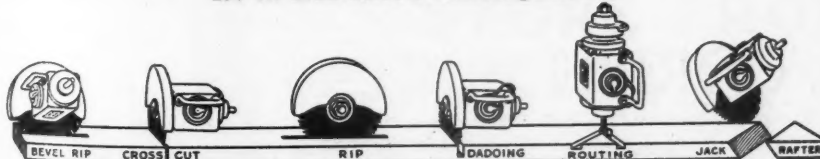
Dadoing
Rabbeting
Cutting Jack
Rafter
Gaining

Ploughing
Routing
Shaping
Tenoning
Grinding

Boring
Sanding
Panelling
Fluting

Capacity up to 5-inch Material

THE WOODWORKING MACHINERY CO., INC.
250 N. 11th Street, Philadelphia, Pa.



The Woodworking Machinery Co., Inc.
250-A N. 11th St., Philadelphia, Pa.

Let me know the remarkable low price on
The Greyhound Slide Saw and full information
as to its construction and performance.

Name.....

Address.....

City..... State.....

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

"To the Ladies"

SOMETIMES it's a mighty hard job to say just who buys the hardware trim for a building. Sometimes it's the architect. Many times it's the contractor. Oftentimes the owner with either of these two helping—and both of them giving good advice.

But if it's builders' hardware for a new home you can just bet there's *one* person who will have a lot to do with its choice. That's the lady who's to be mistress of the new home.

Sit where we do for a single day and read the letters that come in response to Corbin national advertising and you'll see how many of these letters come from women. Women are interested in the hardware trim. They see it as part of their home's decoration—as part and parcel of the idea of a whole house, harmonious in design, color and ornament.

They see the "ensemble" as they call it in modern retail stores. And because women do see the "ensemble" the big department stores are playing it up for all its worth—play it up just because women today want their dresses, hosiery, shoes and hats to harmonize—to be an "ensemble".

What's that got to do with builders' hardware, you say? Just this. The modern contractor is oftentimes in a position to choose most of the materials for building a harmonious, well designed house—hardware trim, paint, maybe wall paper, lighting fixtures, even millwork.

Many and many is the time that it's up to you to decide whether a home shall be harmonious or not—whether its hardware shall be a mixture of good and bad, of cheap and expensive, of ugly and beautiful—or good, suitable hardware from front door to back; upstairs and down.

Sure—it's all right to let the architect worry about this when there's one on the job. But there isn't always an architect on the job. And even if there were—often he leaves the actual selection of the hardware up to *you*.

Certainly nobody knows better than Corbin how many details, worries and responsibilities are carried by a busy contractor. And we also know that the busiest ones are usually the best ones.

That's why they are busy—they're good. They are the contractors who find time somehow or other to build a reputation for themselves while they're building buildings for others. The formula is as simple as A-B-C.

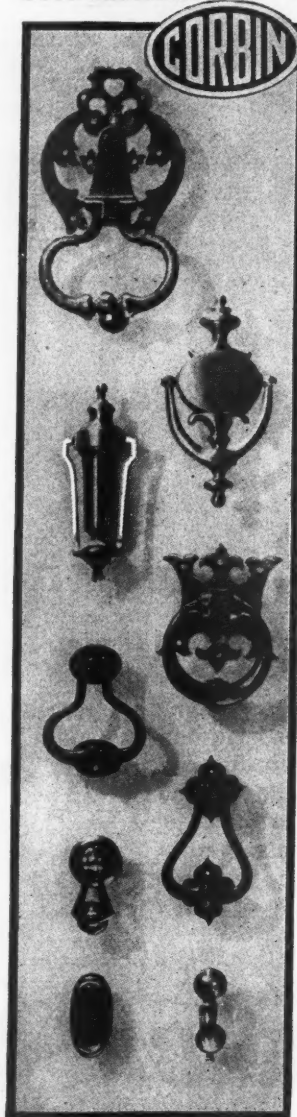
When it comes to hardware, it can be said in six words: Good Buildings Deserve Good Hardware—Corbin.

If such a contractor is building a *Colonial* home he sees to it that *good Colonial* hardware goes on *all* doors—not the front door alone. He knows that one good lockset on the front door won't make the owner forget ten cheap, ugly or inharmonious ones on inside doors.

We know a lot of such contractors. They believe in their business. They have respect for their trade and their reputation. They know that *good taste* and *good hardware* throughout the house will create *good will* for them.

And so far as the hardware is concerned just remember this—Corbin makes every hardware item needed to equip a home or a hotel from bottom to top, and Corbin makes these items in a great many different and authentic styles, designs, and even colors. There's only one answer to the question of *hardware* "ensemble" and that's Good Hardware—Corbin.

Good Buildings Deserve
Good Hardware . . .



P. & F. CORBIN SINCE 1849 NEW BRITAIN CONNECTICUT

The American Hardware Corporation, Successor

New York

Philadelphia

Chicago

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE

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MODERN STORE FRONTS FOR EVERY BUSINESS

A contractor need not be perplexed over store front remodeling jobs. The wide range of Kawneer store front units embodying time proven principles make them easily adapted to practically any store front for any business. They make store front work an interesting and profitable task.

SPECIALIZE

On the business streets of your city are retail stores badly in need of these Kawneer Store Fronts. Many are ready and willing to buy NOW. Prospects for the future are plentiful. Be the first in your city to specialize in modern store front construction and this business is yours.

Kawneer

BRONZE
STORE FRONTS

THE KAWNEER COMPANY
1226 FRONT ST., NILES, MICHIGAN
I'd appreciate more information
about Store Front Specialization

Name.....
Address.....
City.....State.....

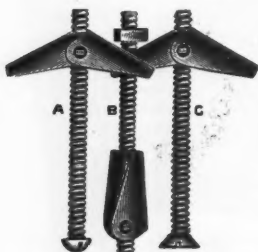
WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER



WHAT'S NEW in BUILDING PRODUCTS for More Salable Construction

A Spring Wing Toggle Bolt for Attaching Tile

WHEREVER it is necessary for you to anchor an object to a hollow tile wall or ceiling, where it is impossible to use a wood screw or bolt with the square nut, you can do it by means of the simple but effective device illustrated here, a spring wing toggle bolt. These toggle bolts can be used advantageously in many places in the average home for attaching shelving, braces for flower boxes, chair railings, stair hand rails,

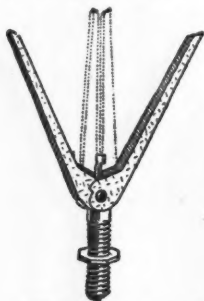


A Spring Wing Toggle Bolt for Anchoring Objects to Any Hollow Building Material.

the user, in nickel plate, chromium plate, cadmium plate or galvanized, in both brass and steel.

By means of these toggle bolts you will be able to attach an object at any place desired. They will hold as much as the wall to which they are attached. They are quickly applied, it being only necessary to drill a hole large enough to allow the toggle head to pass through the wall or ceiling. The bolt is placed through the hole in the object to be attached, the toggle head is then attached to the bolt, the bolt is inserted through the hole in the wall and is then tightened up with a screw driver, making a neat and permanent job. The manufacturers of these bolts have offered to furnish samples to those who are interested.

This same company also manufactures a simple, fast, yet rugged and strong hanger for attaching outlet boxes and



This Hanger Is for Attaching Fixtures to Lath and Plaster Walls and Ceilings.

hat and coat hooks, electrical and plumbing fixtures, etc.

Over 26,000,000 of the toggle bolts have already been sold through hardware, electrical and plumbing jobbers in the United States and Canada, which is evidence of their proven value.

This bolt operates instantly, in any position, in any hollow material. There is a size for every purpose and many types of heads and length of bolts. It is furnished, to suit the convenience of

fixtures to tile or metal ceiling construction. It is used extensively for ventilating fans. This is particularly adapted to lath and plaster walls and ceilings. It is a device containing two wings mounted on a $\frac{3}{8}$ inch nipple, $2\frac{1}{4}$ inches long with a key through the center of the nipple, arranged so as to lock the wings when they are in open position. There is a lock nut provided on this nipple to hold the outlet box against the ceiling or wall. The wings, when in a folded position, are $5\frac{1}{2}$ inches in length and can be inserted through

Starting with the January issue, The American Builder undertook a Specialties Campaign for the year 1929. This department is a continuation of that campaign with which, in accordance with our plan to make the campaign complete, authoritative and of the greatest constructive sales value, we have combined the department formerly entitled "What's New." In publishing this department we omit the names of the makers and sellers of the articles described. This information is, however, kept on file and will be mailed to anyone interested; address American Builder, Information Exchange, 105 W. Adams St., Chicago.

a hole $1\frac{1}{8}$ inches in diameter. When in attaching position the wings give a spread of 11 inches.

This hanger can be attached to the outlet box before inserting it in the ceiling or wall, thus eliminating considerable overhead work in attaching the boxes the old way. To remove the hanger it is only necessary to insert a screw driver upwards through the nipple. This will raise the key which will allow the wings to fold and the hanger to be removed.

Complete Knock-Down Screens

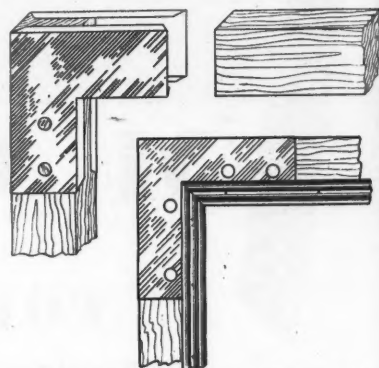
SCREENS can be quickly made and put up, with a minimum of labor, if they are purchased in knock-down

form with complete accessories for assembly. The screen frames which are offered in this way are packed in corrugated cartons to simplify handling and storage. The carton contains the four strips, four extra heavy moulding pieces for covering the edges of the wire, four steel corners, as shown in the illustration, and even the nails for the corner. The only thing that

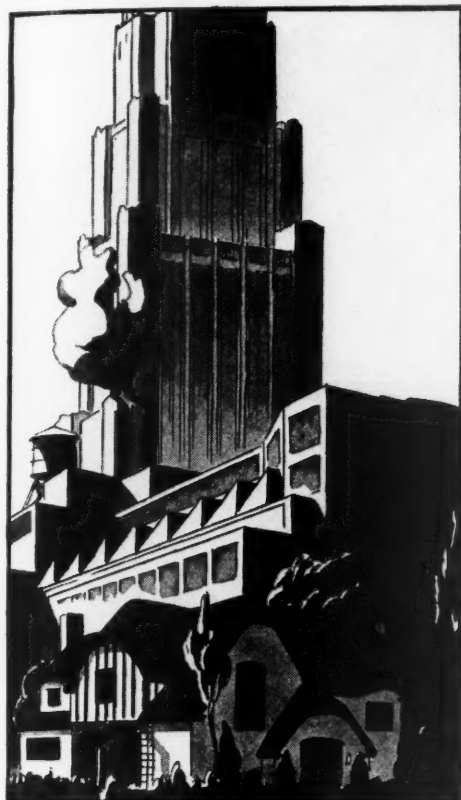
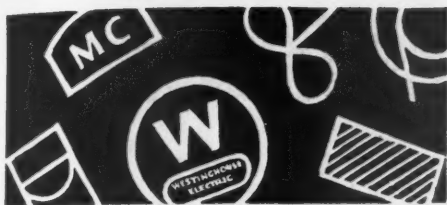
must be bought separately is the wire screen cloth. The half screens have the side strips grooved and stationary strips are supplied.

These screens are quickly put together because the steel socket corners automatically square up the two ends whether they have been sawed accurately or not. A hammer and saw are the only tools required. The strips may be sawed to approximate size, the corner pieces put on loosely and the frame may then be fitted into the window. While in this position two nails may be started in each corner piece to hold the wood strips in place and the frame may then be removed and the remaining nails put in.

The dealer need only stock four sizes of the frames which will cover all the needs for half screens, full length screens and porch screens. The weakest point in screens has always been at the corners. The socket corner used on these screen frames is so constructed that the corners are no longer the weak spots and they are also protected from moisture getting in and causing decay. The frames are made of clear redwood and the metal corners are stamped from 28 gauge galvanized steel.



Knock-Down Screen Frames Assembled by Means of Steel Corner Fittings Save Labor and Are Long Lived.



*Westinghouse
equipment for buildings
includes:*

Circuit Breakers	Panelboards
Elevators	Ranges
Fans	Safety Switches
Fuses	Solar Glow Heaters
Insulating Materials	Switchboards
Lamps	Turbines
Lighting Fixtures	Transformers
Motors and Control	Watthour Meters
for Ventilating Sys- tems, Pumps, etc.	Water Heaters



*The Sign of a
Westinghouse
Dealer*

For bungalow or business building complete electrification from a single source . . .

The towering downtown structure and the suburban dwelling have this modern problem in common:

Both need reliable electric installations to make them fit the requirements for which they were designed.

Both can have complete electrifications of the same high quality and from the same responsible source—Electrifications by Westinghouse.

Westinghouse has designed and manufactured complete electrical equipment for many of the leading buildings of the country. Through the widespread Westinghouse organization all the equipment can be supplied, from lamps to elevator equipment, from panelboards to pump motors—for the complete electrification of any building, large or small.

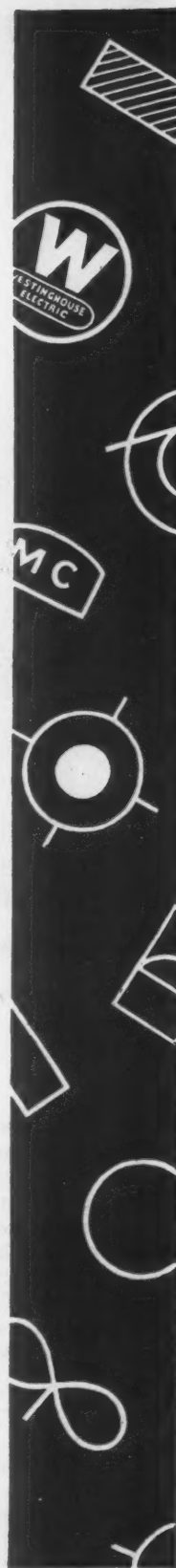
Detailed data on all Westinghouse products is available to any one charged with the responsibility for equipping modern buildings. And there is a Westinghouse building specialist available within easy call of any office.

Write for the new Westinghouse publication, "Building in the Electrical Age."

WESTINGHOUSE ELECTRIC & MANUFACTURING CO.
EAST PITTSBURGH, PA. OFFICES IN PRINCIPAL CITIES

Westinghouse

Complete electrification for modern buildings



SPECIALTIES for Quick Sales and PROFITS

"Why not be consistent Jim?"



"You specified the latest lighting fixtures and newest plumbing equipment. Yet a woman turns a door knob more times a day than she uses either one of those. Why not **MODERN Door Locks** too?"

WHY spoil the effect of the money you've already spent? Small satisfaction for people to have rooms filled with the latest equipment if they have to struggle with door locks or hunt for keys to get from one room to another. Little gained by fixing up a fine, modern kitchen, beautiful baths, and distinctive bedrooms if you mar their appearance and kill their conven-

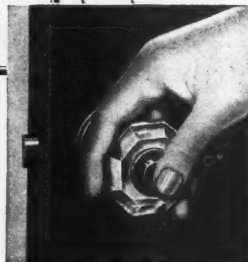


TO LOCK
Just press the
button in
the knob

TO UN-LOCK
Just turn
the knob

SCHLAGE Button LOCKS

Made by SCHLAGE LOCK CO., San Francisco, Cal. Branches in principal cities



ience with old-fashioned door locks. Locks that make people play hide-and-seek with inside keys are out of date. Modern locks, like modern lights, operate at the touch of a handy button—specify **SCHLAGE Button LOCKS**. Unit type. Factory-assembled. Quicker installation. Snappier action. No wobbly knobs. No exterior screws in spindle, knobs, or escutcheons. Artistic, distinctive appearance. Surpassing press-the-button convenience. Pin tumbler cylinder safety. Over a million and a half in use. 13 types. All metal trims solid brass or solid bronze. Sold by leading hardware dealers everywhere. Mail coupon below for **SCHLAGE Catalog**.

SCHLAGE LOCK CO., SAN FRANCISCO

Send me a copy of **SCHLAGE Catalog**
AB-3

Name.....

Street.....

City.....State.....

The MODERN Lock for MODERN Buildings

SPECIALTIES for Quick Sales and PROFITS

Balsam-Wool

Blanket

- it tucks in!

**In building for sale or on contract
be sure to include this feature**

Balsam-Wool is a guaranteed Weyerhaeuser product—a blanket of fluffy wood fibre that looks and acts like sheep's wool. It is TRUE insulation—keeping the house warm in winter and cool in summer—because it is—

**FLEXIBLE-THICK
EFFICIENT
WINDPROOF
WATERPROOF
FIRE RESISTANT
VERMIN PROOF
LIGHT WEIGHT
PERMANENT**

Too often house heating is thought of in terms of boiler size and feet of radiation—in terms of heat making and not heat saving. If you will consider insulation as part of the heating equipment you can save money for your customers and advance your own interests, whether you build to sell or build on contract.

Modern heating equipment includes walls and roof made *heat-tight* with a full inch blanketing of Balsam-Wool. Such blanketing saves at least 25% of the radiation otherwise required. It saves from 25% to 40% of the annual fuel bill. It pays for itself plus annual dividends.

Balsam-Wool is flexible. It fits snugly between joists, studdings and rafters. It tucks into corners and odd shaped places. It caulks cracks and spaces around window and door frames. It seals the heat in. It is *true* insulation—a feature that will help you sell your houses or help you win more contract business.

Whenever considering heating equipment consider Balsam-Wool. Ask your lumber dealer about "the true insulation that tucks in." If his stocks do not include it, write us for names of dealers who can supply you.

**WOOD CONVERSION COMPANY
CLOQUET, MINNESOTA**

Makers of Balsam-Wool, the Flexible Insulating Blanket. Also Makers of Nu-Wood—the All Wood Insulating Wall Board and Lath

Sales Offices: New York, 101 Park Ave.—Detroit, 515 Stephenson Bldg.—Chicago, 260 N. Michigan Ave. Minneapolis, Baker Bldg.—Kansas City, 231 W. 47th St.—Seattle, 6659 White Bldg.

SOLD THROUGH RETAIL LUMBER DEALERS

Better Office Building Locks

TENANTS can be more easily secured for a building if the manager can assure them that the office, when closed, will be guarded by a lock that cannot be operated by a former tenant, a discharged employee or any other unauthorized person. A new lock, with demountable knob and exchangeable cylinder, provides this protection for the tenant and possesses the further advantage of giving the management of the building complete control of the keying system together with flexibility.



Flexibility of Keying Has Been Highly Perfected in These Locks by Means of Demountable Knobs and Exchangeable Cylinders.

This is accomplished by the use of a complete lock set of the key-in-the-knob type, but with the outside knob removable and the cylinders interchangeable. This does not alter the appearance of the lock or change its operation or impair its security in any way. Changes are quickly made by simply taking off the knob and putting on a different knob with a different key change or changing the cylinder and replacing the knob.

Special designs, from architects' drawings, can be furnished to order. The lock shown in the illustration is a proprietary design supplied for the Fisher Building, Detroit, Mich., Albert Kahn, Inc., architects.

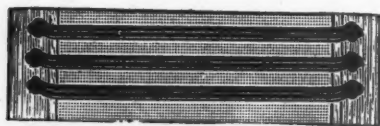


Guard Protects Screen Wire

EVERYONE has seen screen doors on which the wire cloth had been stretched out of shape or torn loose. This is generally caused by someone opening the door by pushing on the cloth instead of on the frame of the door. Single panel doors are most apt to be disfigured in this way. So are the lower panels of doors where there are

small children in the family. The guards or push bars illustrated here will prevent this.

These guards are made of pressed steel or brass and are in three sections which



These Guard Bars Protect the Wire Cloth of Screen Doors and Add to Their Appearance.

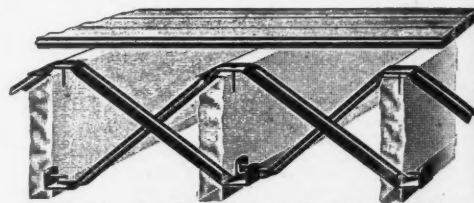
telescope together, so that they can be contracted or expanded to any length from 24 to 32 inches and will fit practically all residence screen doors. They are attached by means of two screws and are used either singly or in sets of two or three. They protect the wire cloth and improve the appearance of the door.

The most popular styles are made of pressed steel, finished in dull black lacquer. The brass lacquer finish matches plated and solid brass hardware. The solid brass bars are somewhat more expensive, but available at a reasonable cost.



Steel Bridging Quickly Installed

A NEW product which is of interest to every builder is the patented steel bridging illustrated here. This type of bridging connects with three beams and holds by tension rather than compression. The manufacturers state that it is stronger than wooden bridging and that actual tests have shown it to be more than equal to two by two pine bridging.



This Simple, Easily Installed Steel Bridging Has Great Strength and Eliminates Misfits.

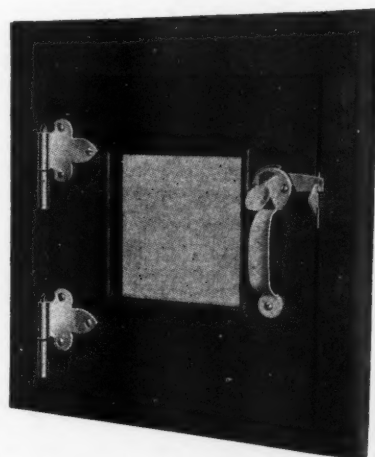
The makers also state that this bridging can be installed in one-third the time required for other bridging and only one piece, attached with three nails, is used per joist instead of two pieces attached with eight nails. It eliminates all bother of preparation and all misfits or faulty material. It adjusts itself automatically to variations in angles and spacing of joists.



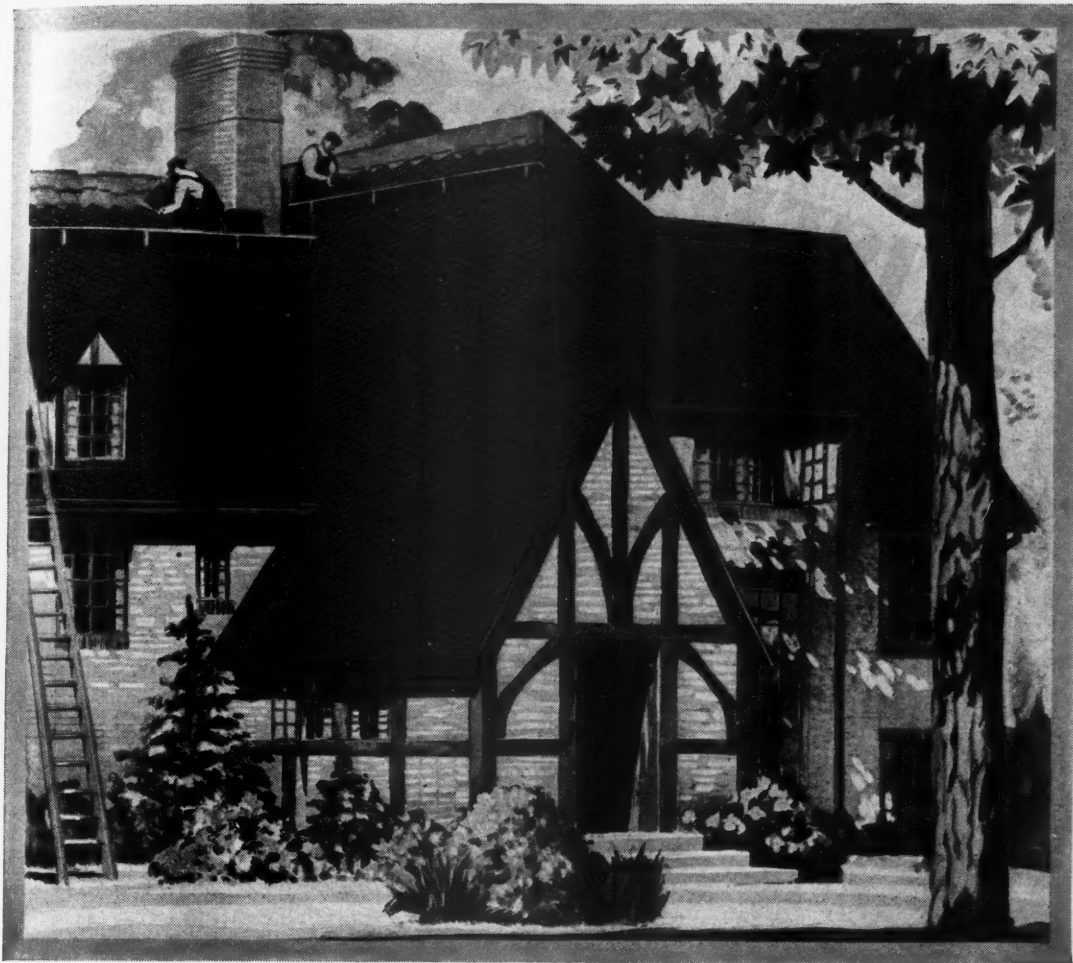
Attractive Screen Door Sets

AN attractive new set of hardware for screen doors, incorporating several new features, has recently been placed on the market by a well known manufacturer. This new unit includes two, half surface, loose joint shoulder pin hinges in a fleur de lis design. The latch is of thumb lever design and is furnished assembled complete with a patent lock feature. The keeper is set in position on the door jamb and this item, as well as the hinge butts, may be applied either flush or mortised as desired. Both are reversible and can be used on either right or left hand doors. An escutcheon plate, coil wire spring and screws for installing, complete the set.

As the illustration shows, this makes a pleasing installation which is simple in construction and speedy in installation. It was developed, it is stated, to meet an insistent demand for an attractive, efficient yet inexpensive screen door set. The manufacturers offer a folder illustrating and describing this new product in full.



Attractive, Inexpensive Screen Door Hardware Brought Out to Meet an Insistent Demand.



Extra Money for Contractors

Here's additional business for you. Use Genasco Latite Shingles over siding or stucco of old homes—adds new and lasting beauty, affords extra protection—and is profitable for you.

This interests YOU whether you are a Builder or a Contractor!

To Builders who want to sell their homes quickly

The sooner you sell the homes you build, the better it suits you. And Genasco Latite Shingles help along the selling. They make a roof that attracts attention by its beauty. Tell your prospective home-buyers that it is made of Genasco Latite Shingles and they readily recognize them as nationally advertised products.

Genasco Latite Shingles are resplendent with color—the dominant note of modern times. In their attractive non-fading colors—red, green, blue-black, and Mix-Tone, a harmonious blending of color—they are charmingly beautiful for roofing. And they are waterproof, weather-resistant, fire-retardant, and unusually durable.

Not only are Genasco Latite Shingles made of tough, long-fibred, asphalt-saturated rag felt, but they are also coated on both sides with Trinidad Lake

Asphalt Cement, which is produced from that wonder of nature—Trinidad Lake Asphalt. Only Genasco Shingles are waterproofed with this material, and its weather-resisting qualities seal the saturant in the shingles and prevent them from deteriorating.

Genasco Latite Shingles are advertised in *Better Homes and Gardens*, *House Beautiful*, *American Home*, and *House and Garden*—full pages in color telling the millions of readers of these magazines of nation-wide circulation

To Contractors who want to get into a steady business

Genasco Latite Shingles show you the way to make money all through the year. You can roof new buildings going up all around you. You can re-roof old buildings. There's work for you summer, winter—all the time. Genasco Latite Shingles are particularly suitable for re-roofing—put them on right over the old worn-out roofs.

about the advantages of Genasco Latite Shingles—and we turn all inquiries over to our dealers.

Don't put it off! Fill in the coupon right now and find out how Genasco Latite Shingles help builders sell homes—how they help building contractors into the steady, profitable business of applying shingles. Use the coupon—mail it today!

The Barber Asphalt Company Philadelphia

New York Chicago Pittsburg St. Louis
Kansas City San Francisco



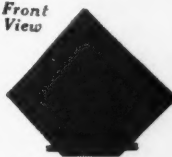
Genasco

Reg. U.S. Pat. Off.

Latite Shingles

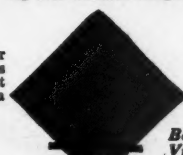


Front
View



The turned-under corner holding the "key" makes a double-thick butt that adds distinction to a Genasco Latite Roof.

The patented "key"—invisible on the completed roof—locks each Genasco Latite Shingle tightly to those underneath, and makes Genasco Latite particularly adapted for laying over worn-out shingles.



Back
View

AB-3
The Barber Asphalt Company, Philadelphia

Please have your representative call and tell us about Genasco Latite Shingles.

Name.....

Address.....

THERE'S SATISFACTION IN QUALITY

You always have a better satisfied customer when you turn out a quality job for him. And when you can give him such a job without any cost penalty you are creating plenty of new business for yourself. Genfire can help you do this. Genfire manufactures a complete line of Steel Building Products, nationally known and preferred. They are quality products but they are priced right. And Genfire's manufacturing facilities, dealers, and nation-wide warehouse system are your best assurances that all your needs will be supplied fully and right on time. Literature on any or all products sent on request.



Genfire Casements—the most modern of windows.



Genfire Metal Lath—assures permanent beauty of plaster effects.



Genfire Steel Joists—the modern, firesafe floor construction.

GENFIRE FIRESAFE BUILDING PRODUCTS

A Complete Line of Steel Building Products

Standard Steel Casements
Pivoted Steel Windows
Projected Steel Windows
Double-Hung Steel Windows
Donovan Windows
Basement Windows
Pressed Steel Lintels
Steel Doors and Frames

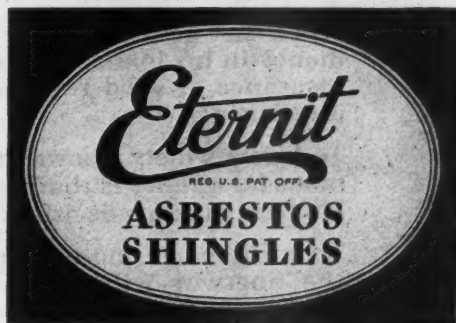
Trussit
Steel Tile
Welded Steel Fabric
T-Bar Girder Steel Joists
Plate Girder Steel Joists
Corner Bead
Self-Sentering
Expanded Metal
Interior Metal Trim

Herringbone Lath
Key Expanded Lath
Diamond Rib Lath
Genfire Sheet Bridging
Duplex Steel Iron Lath
Armed Ingot Channels
Waterproofing
Compounds

Genfire Steel Company - Youngstown, Ohio
Manufacturers of a Complete Line of Firesafe Building Products, also Waterproofings and Concrete Preservatives. Branches in all Principal Cities. Dealers Everywhere.

Mellow fast colors and shadow lines that architects and home-owners demand—plus resistance to fire and weather

ETERNIT roofs will help you sell your house



THAT asbestos shingles are fire-proof has never been questioned. That they are economical and durable is taken for granted. And now Eternit has added an additional quality—beauty. That combination makes Eternit Asbestos Shingles an outstanding roofing material—both from the viewpoint of home-owners and of builders who want to sell more homes.

Eternits have mellow colors in wide variety. Emerald Green, Colonial Gray, Quarry Blue, Indian Red—all are absolutely colorfast! They positively will not bloom or fade out. Rain and stormy weather won't stain them. Autumn Bronze, and Heatherblends (a combination of

five harmonious shades) are equally beautiful, enriched by the passing of the years. . . . A roof of such beauty will increase the value of any home you build.

Durable and economical

You know the other Eternit features. Made of selected asbestos fiber and Portland cement. Hard and tough. Absolutely fire-proof. Easy to apply. Won't chip, rot, or raise. Eternit Horizontals, an original and popular style, made only by Eternit. Economical—because an Eternit roof will last as long as the building stands!

For the finest residences, for any development work—use Eternit Asbestos Shingles. You'll find that Eternit—in the opinion of both

home-owners and architects—stands for beauty in asbestos shingle roofing. And beauty in homes means profit for you. Let us send you information, roofing directions, and samples. *Eternit, Inc.*, Riverview Drive, St. Louis. Offices and warehouses at Philadelphia, New Orleans, Houston and Jacksonville.

ETERNIT, INC., Dept. C
Riverview Drive, St. Louis

Please send me full details, roofing directions and samples.

Name

Street

City

State

Dealer's Name

FOR THE PROTECTION OF THE BUILDER EVERY ETERNIT SHINGLE IS TRADE-MARKED; EVERY ETERNIT ROOF IS REGISTERED



He buys *known* quality

The average business man is skilled in his own line. But his line is not the building of houses.

When he goes to invest considerable money in his home, he wants the assurance of good returns on his investment.

To him a widely known name famous for *quality* is that assurance. It often wins his decision.

To millions of home-buyers the Sherwin-Williams name represents *the finest* in paints—or varnishes, enamels, or lacquers. From experience, and from the tremendous "educational" advertising program carried on by this famous old company, the public has learned that these superior

quality paints are the *leaders in beauty, in service, and in economy.*

Take advantage of the Sherwin-Williams prestige for the homes you are building to sell...or to please the clients for whom you are building. It wins confidence and recommends the quality of all materials used. Often it is the deciding factor in a sale.



See Sweet's Catalog for help in planning Sherwin-Williams specifications. Our technical staff will also be glad to assist you.

THE SHERWIN-WILLIAMS Co.

Dept. 720 - 601 Canal Road, N. W.
CLEVELAND, OHIO

SHERWIN-WILLIAMS

Paints Enamels
Varnishes Opex Lacquers

New Steel Hangar Doors

FROM the standpoint of service, doors are one of the most vital parts of a hangar. Being so large, they determine, largely, the working and storage conditions inside. A company which has for many years been a leader in steel door manufacture, has now developed a new hangar door which is weathertight, affords light to the interior and is easily and quickly opened or closed.

These doors are built of 2½ by 2½-inch steel tubing, with all the joints welded to insure rigidity and long life. The large doors are composed of smaller doors 10 feet wide and of heights varying with the height of the openings in which they are to be used. About 66 per cent of each door is designed for steel sash and glass, as plenty of daylight is a prime essential for the accurate mechanical work done in a hangar. This company's own steel sash, which



Weathertight Hangar Doors of Steel Which Can Be Easily Opened and Closed by One Man and Which Admit Ample Light.

retains 80 per cent of the metal at the intersections of the muntins, is used.

The doors ride on ball bearing wheels on a track imbedded in the floor. Only guide rails are used at the top, allowing the entire weight to rest on the floor. This feature makes possible great savings in the cost of roof construction and also allows an opening entirely free of supporting columns. The tracks are laid so that when the doors are opened they roll around the corner entirely out of the way along the inside of the wall. They operate so easily that one man can close all the doors in a short time.

Weathertightness is secured by means of guides which extend down from the top, forming a pocket in which the doors fit. The wheels are so mounted at the bottom that the door and the rail have no large crack through which wind and water can enter. At the jambs weatherstripping is used, making each unit individually tight. Large bolts fit in sockets in the floor and hold the doors rigidly in place when closed.



A New Type of Electric Tubing

THE electrical metallic tubing, shown in use in the illustration, is supplied in 10-foot lengths. One union type coupling is supplied free with each length. It is available in ½ inch, ¾ inch and 1 inch, electrical trade sizes with the same inside diameter as heavy wall conduit. The exterior is electro-galvanized and the inside is coated

with baked enamel. The ends are protected by metal caps to avoid damage in shipping.

The manufacturer claims as advantages for this new material that it eliminates all thread cutting, is easy to work on the job, is easier to handle because of lighter weight, can be used with any threaded or threadless fittings, presents maximum protection against corrosion, costs less, carries a standard resale price and saves money by speeding up installations.



Workability and Elimination of Thread Cutting Make This Metallic, Electric Tubing Economical.



Improved Barn Vent Sash

AN important point in good barn construction is the question of ventilation. Farm stock must have good ventilation just the same as human beings but, like human beings, they must not be allowed to stand in direct drafts. A direct draft or windblow on the stock is dangerous. They can be avoided and at the same time good window ventilation provided by the use of the window illustrated here.

This is a puttyless steel window of a well-known make which can be furnished with either six or nine lights as desired. It is equipped with steel wind shields which are removable. They are fastened on rivets on the inside of the tee bar frame and act as hinges for the ventilating section.

They are provided on these windows at a cost only slightly greater than that of regular windows of the same size. A chain operator device can also be supplied, if desired, at a slight additional charge.

These windows can be installed easily in frame, cement, brick, tile or cinder block construction and will last indefinitely. With these windows installed there will be no wind blowing on the cattle in front of the window when it is open or on the cattle in the next stall.



The American Society for Testing Materials, 1315 Spruce St., Philadelphia, Pa., has published, in pamphlet form, an "Index to A. S. T. M. Standards and Tentative Standards— as of September 1, 1928." This index now becomes a permanent annual publication of the Society.



Improved Ventilating Sash for Barns.

Announcing

A Distinct Improvement In STEEL JOIST CONSTRUCTION . . .

A year ago Kalman introduced the modernized steel joist—Kalmantruss Joist. Made by a new and different method which met universal approval.

Now Kalman announces a distinctly new and positive compression bridging for use in steel joist construction. Kalmantruss Compression Bridging provides the bracing necessary to assure the vertical position of joists—to assure the accurate spacing of joists—to assure rigidity of construction.

Kalmantruss Joists, Kalmantruss Compression Bridging, Kalmanlath, and the complete line of Kalman accessories, provide a modern, safe, and practical fire-safe construction for the owner, the architect, and the contractor.

KALMANTRUSS

STEEL JOIST CONSTRUCTION

KALMAN STEEL COMPANY

ATLANTA
BALTIMORE
BOSTON
BUFFALO
CHARLOTTE

CHICAGO
COLUMBUS
DAYTON
DETROIT
HOUSTON

KANSAS CITY
MILWAUKEE
MINNEAPOLIS
NEWARK
NEW YORK

NILES
PHILADELPHIA
PITTSBURGH
ST. PAUL

SYRACUSE
YOUNGSTOWN
WASHINGTON, D. C.

Export Office—NEW YORK



Hotel Biloxi, Biloxi, Mississippi. Architects, Federal Engineering Co. Associate Architect, H. S. Muesse. Eleven Union Metal Columns No. 213, 38' 6" in height with two pilasters to match used on the entrance. In addition half and quarter round columns 16' 11" in height of the same design were supplied.

When Columns are Needed Specify UNION METAL

WHEREVER columns are used they form an integral and important part of the building. Thus it becomes most essential that the columns installed be architecturally correct in every detail—and that they be *lasting*.

Because Union Metal Columns are faithful reproductions of the classical orders, possessing the correct entasis, apophyge, stopped flutes and authentic caps and bases, they express the true spirit of the architect's conception.

Union Metal has worked with leading architects for nearly a quarter of a century and has supplied for them columns of pressed steel in heights up to forty feet. The life of these columns is not yet known for original installations made over twenty years ago are still in service!

Before you specify columns on another job write for the Union Metal catalogue.

THE UNION METAL MANUFACTURING CO.

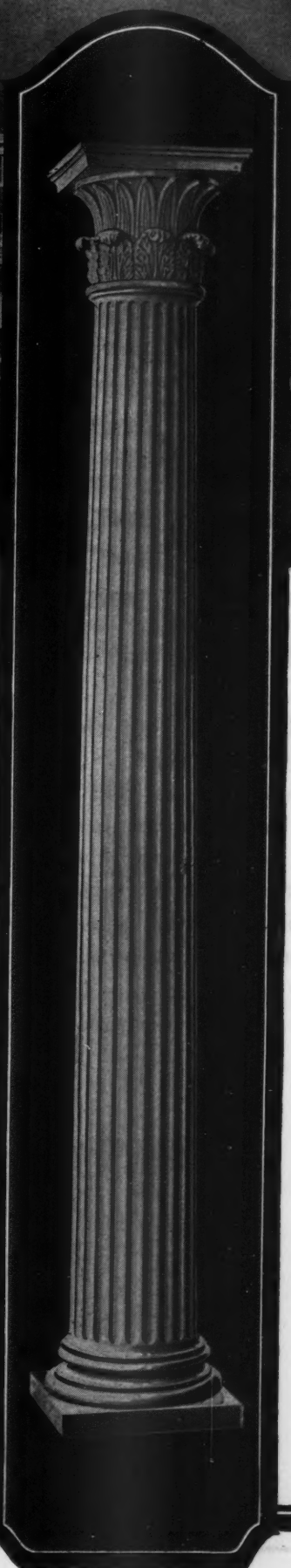
General Offices and Factory, Canton, Ohio

Branches — New York, Chicago, Philadelphia, Cleveland, Pittsburgh, St. Louis, Los Angeles, San Francisco, Jacksonville.

UNION METAL COLUMNS

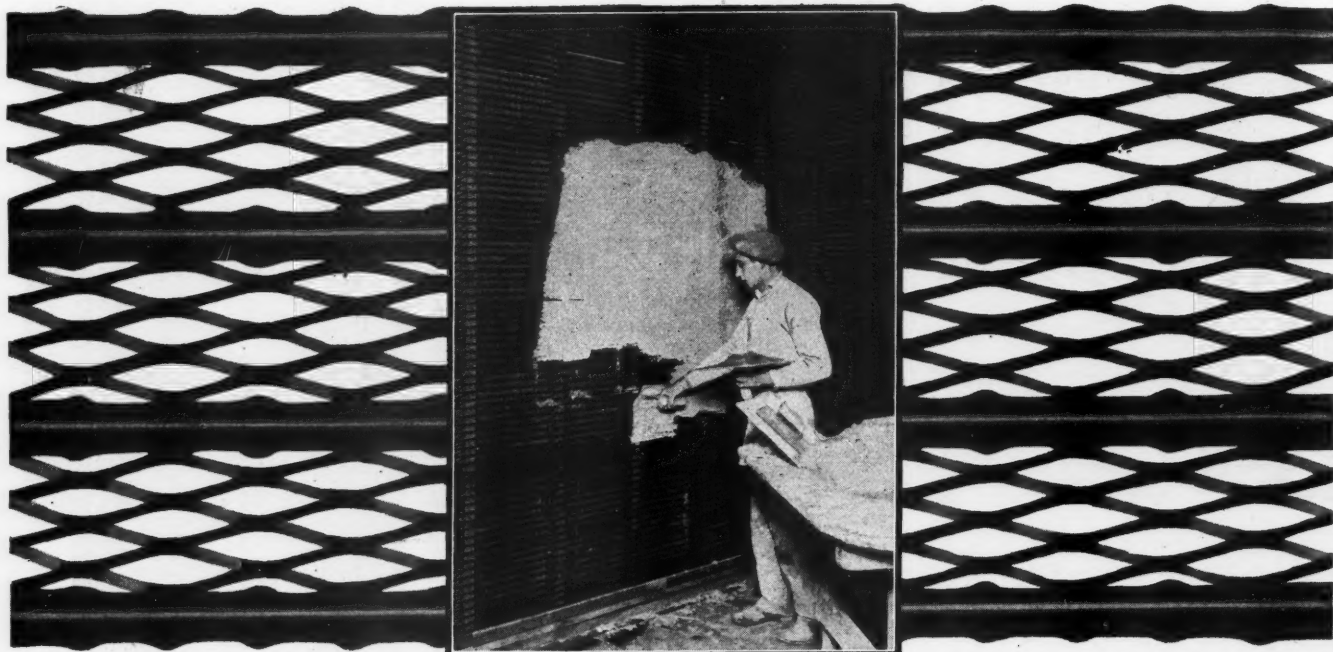
"THEY LAST A LIFETIME"

*Union Metal
Pressed Steel
Column No. 213,
Temple of the
Winds design.
This is one of
ten classical de-
signs made in
heights up to 42
feet.*



SPECIALTIES for Quick Sales and PROFITS

Build with STEELCRETE Products for Greatest Economy



AT the head of the Steelcrete Line is Steelcrete Diamond Flat Rib Lath—the only lath on the market that combines the advantages of two distinct products. The *Ribs* assist rapid, efficient plastering. The *Diamonds* insure perfect bond.

You get in one lath the plaster saving and keying advantages of Flat Rib with



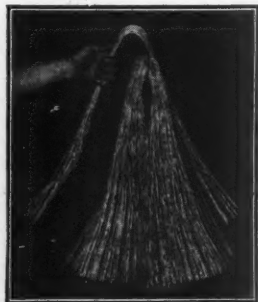
the strength of reinforcement of Diamond Lath. The plaster saving advantages *alone* make it worthy of your immediate consideration.

Let us show you what Steelcrete Service, and Steelcrete Quality can mean to you this year. Send today for samples, prices and Time Tested Products Book.

THE CONSOLIDATED EXPANDED METALS COMPANIES

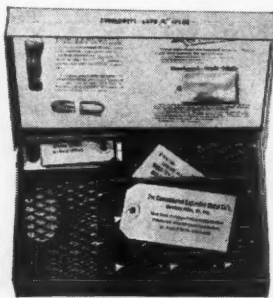
Steelcrete Building, Wheeling, West Virginia

Atlanta Boston Cleveland Philadelphia
Pittsburgh Chicago New York Buffalo



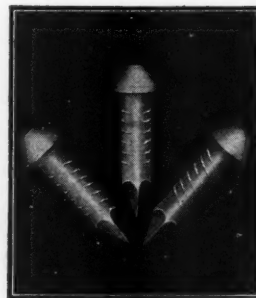
Hank Wire

Here is a Tie wire designed for the Lather. A product of unusual strength, yet soft and pliable for quick and efficient workmanship. Wrapped in sanitary packages, a safeguard to the Lather like sterilized nails. Supplied in hanks 25 lbs. each.



Steelcrete Sample Offer

Builders eager to protect their investments and profits will want to know the Steelcrete Line. Write to us today for samples. There is no obligation.



Steelcrete Stub Nails

Here is the Nail you can drive into Concrete without bending, breaking or blunting the point. Heavily zinc coated. Comes packed 1000 to the bag; also in 100 lb. kegs. The ideal nail for securing corner beads, metal lath and hangers.

SPECIALTIES for Quick Sales and PROFITS

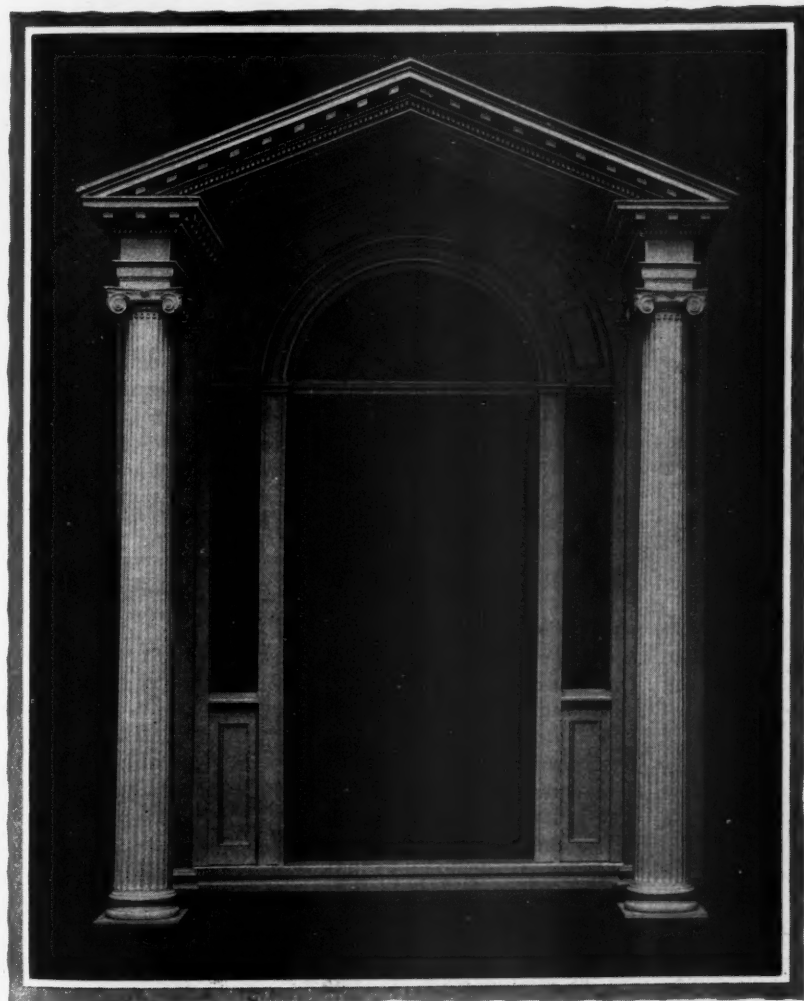
The old BRISTOL HOUSE

was famous for its *Colonial architecture*

Designed in the true Colonial spirit by David Hoadley... and built in the early 19th century at New Haven, Connecticut

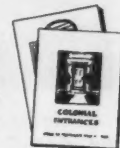
... the Bristol House is said to have frequently entertained as its guests Washington, Jefferson and many other noted men of early American history.

Especially has the entrance to the Bristol House achieved lasting fame. Original in conception, gracefully free in execution, refined in detail and proportion, satisfying in type, and unusually consistent in scale, it is today being preserved in the Metropolitan Museum.



Entrance to the old Bristol House, New Haven, Connecticut . . . now in the Metropolitan Museum

THESE TWO BOOKLETS OF
AUTHENTIC COLONIAL EN-
TRANCES AND COLUMNS
GLADLY SENT ON REQUEST



Architects and builders may specify entrances for remodeling as well as for new Colonial homes and other buildings that are practically duplicates of the Bristol House and other famous doorways. In two new booklets, recently published by Hartmann-Sanders, is shown a notable group of such entrances and columns. All are of purest Colonial design. All are the work of skilled men who have devoted years to the finer phases of designing, building and remodeling in the Colonial tradition.

Write for the booklets. No charge, of course. Address Dept. Y, Hartmann-Sanders Co., Factory and Showroom: 2171 Elston Ave., Chicago. Eastern Office and Showroom: 6 East 39th Street, New York City.

HARTMANN - SANDERS

PERGOLAS

COLONIAL ENTRANCES

KOLL COLUMNS

ROSE ARBORS

GARDEN EQUIPMENT

Pipe Fittings for Warehouse and Stockroom Shelving

WHEN fittings for pipe structures were originally designed their application to switchboard structures was the only object. It was not long, however, before other useful applications were made due to their adaptability and ease of installation. At the present time this list has now increased to include not only switchboard frames, but outdoor substations, racks, railings, pipe line supports, cable supports, and sign structures. The most recent use is for stock bins and shelving.

To maintain the standard of service which the developers of these fittings assure users and distributors of their products, large stocks in their warehouses are necessary. These stocks are by no means confined to complete products. However, the ever-increasing sale of complete products has necessitated having large quantities of renewal parts on



Shelving Supported by Pipe Fittings Provide an Exceeding Adaptable, and at the Same Time Economical, Equipment for Warehouses and Stockrooms.

hand constantly, which in most cases care for requirements when unfortunate breakdowns occur. This brings to the front a great variety of storage problems, of which one of the most aggravating has recently been solved by the use of structural pipe fittings in the construction of shelving.

The chief reasons for finally selecting these pipe fittings for shelving were:

1. The ease with which anyone could construct the racks.
2. The savings in cost.
3. The adaptability of these fittings for rearrangement at any time.

The particular problem involved was the economical storage of the various sizes of boxes and packages which, in the vocabulary of the storage warehouse, would come between the bin stocks and the floor stocks. Standard steel shelving units, of course, provide for the smaller bin stocks. The larger lots of uniform size boxes are no problem at all in floor stocking but the smaller lots of the intermediate size packages waste considerable space either stacked on the floor or piled on to steel shelving.

The accompanying photograph shows very clearly the space-saving features of the new shelving, as the maximum height of storage, before the construction of the new shelving, is underneath the first shelf. The first installation has

been put in on the sixth floor of this company's warehouse and consists of eight units, each five feet wide and 84 feet long, with intermediate uprights seven feet apart.

Structural pipe fittings 1¼ inches in size were used together with extra strength pipe of the same size. The structure is anchored by the use of 1¼-inch to one-inch reducers and five-inch nipples at the top of each upright, the nipples being backed out of the reducers against the ceiling. The shelf-construction is of ordinary pine boards cleated together about three inches apart. These cracks or openings between the boards are left to provide for the easy flow of water from the sprinkler system in case of fire.

This construction provides for a much greater variety of applications than the standard steel shelving. The shelves can be set at any height from three inches above the floor up. The uprights are clamped to the long pipes which makes it possible to increase or decrease the openings between the uprights at will. If storage is required for heavy material necessitating greater strength, uprights can be moved closer together or additional ones very easily added. If a very light stock, such as lamps or glassware, is to be stored, a still greater distance apart for these uprights would be permissible and very easy of accomplishment.

The cost is approximately 25 per cent cheaper than steel shelving designed for the same purpose. Coupled with this, steel shelving could not be put in with openings between uprights greater than three or four feet. This would decidedly reduce the storage area because of the great variety of packages to be stored. The steel shelving could not be installed without cutting into the ceiling or floor for anchorage which is not necessary with these pipe fittings. This shelving could be made entirely fireproof by replacing the wood cross members with steel.

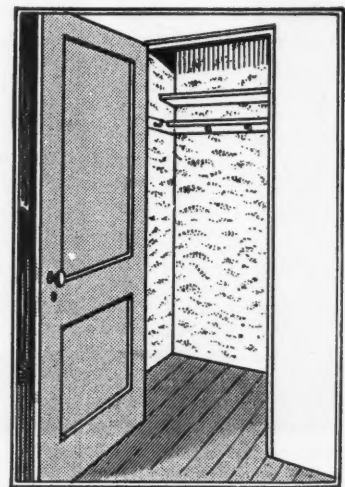


Cedar Plaster for Closets

CEDAR has long been used as a protection for clothing against moths. Its characteristic fragrance, while pleasing to human beings, is repellent to insects, and in the finer homes, where cost is not so important a consideration, cedar closets have demonstrated their value. Comparatively recently the idea of placing this cedar fragrance in the wall itself was developed and there is now available, in the form of a plaster, a cedar material which serves the same purpose as cedar wood lining for closets.

This is a concentrated mixture of genuine Tennessee red cedar wood and other ingredients which form the basis of cedar fragrance in cedar wood blended into a plaster which is used as a finishing coat wherever cedar closets may be desired. It can be used just as readily in old homes as in new. The manufacturers state that a wall so finished has the same amount of lasting fragrance as a similar wall of wood and provides the same benefits at a much lower cost.

The smooth, hard surface is sanitary, dustproof and waterproof. It can be washed with ordinary soap and water without destroying its fragrance. It is easily applied in closets where irregularity of construction would make cedar lining difficult.



All the Advantages of Cedar Lined Closets Are Possible at Low Cost with Cedar Plaster.

bringing homes up-to-date...

*with INSULITE,
the double-purpose insulation*

Money filters through uninsulated roofs.

The occupants of such homes may pile on more fuel—run the furnace full tilt—but they can't heat all out-doors.

The thing to do is to line the attic with INSULITE and reduce heating costs. In summer the difference will be just as great; every room in the house many degrees cooler.

Many attics—when finished off with INSULITE Building Board—make ideal play rooms, work shops, sleeping quarters, sewing rooms, etc.

These are good things to suggest to owners for whom remodeling work is done—and of course the attic of every new house you build should be insulated with INSULITE.

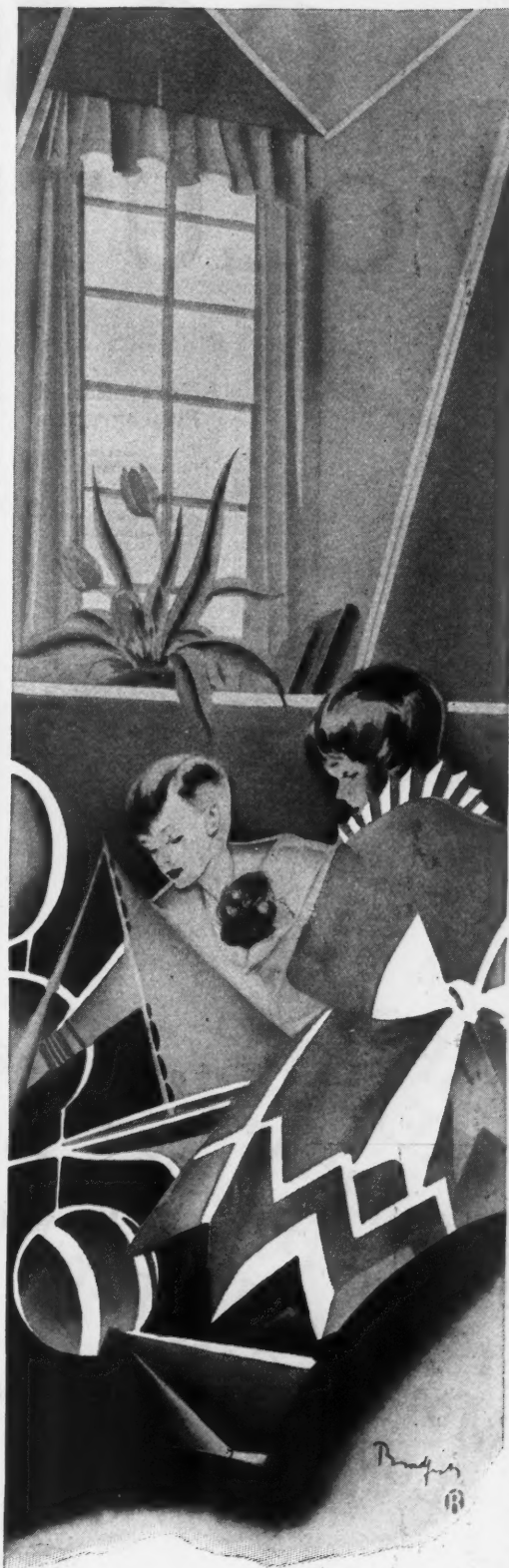
Write for free samples, also booklets showing how to use INSULITE Building Board as sheathing or wall board—INSULITE Plaster Base—INSULITE for acoustical correction and sound deadening, for lining attics and garages, etc.

THE INSULITE COMPANY
1202 Builders Exchange Department No. 7
MINNEAPOLIS, MINN.

Good lumber dealers sell

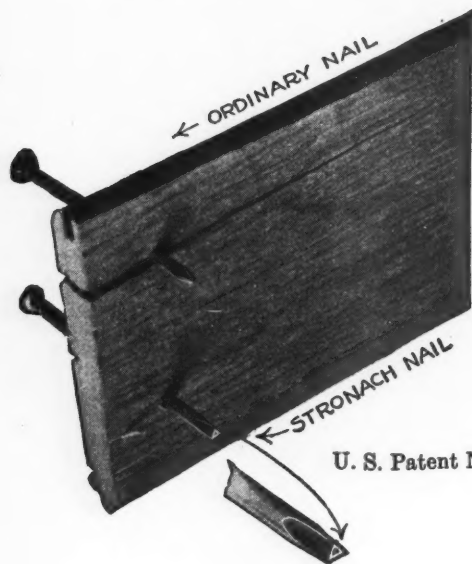
INSULITE

the Wood-Fiber Insulating Board



SPECIALTIES for Quick Sales and PROFITS

COSTS REVOLUTIONIZED



Unretouched Photographs

The camera always tells the truth. The illustrations presented here are unretouched actual photographs.

U. S. Patent No. 1,466,676

**4
CARDINAL
REASONS**
Non-Splitting Feature
Increased Holding Power
More Nails per Pound
Lower Cost Per Nail



in
**New Construction
Plant Maintenance
Manufacturing
Boxing and
Crating**

by using
**THE NEW
STRONACH
PATENTED
NON-SPLITTING
NAILS.**

Sold to the **BUILDING TRADE** through
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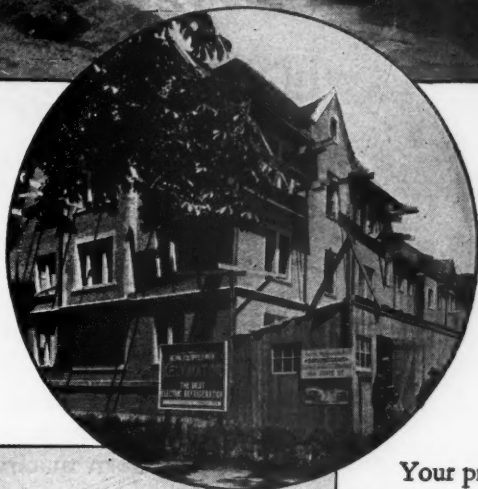
STRONACH NAIL COMPANY
2008 Union Bank Building
Pittsburgh, Pa.



SPECIALTIES for Quick Sales and PROFITS



(right) Elm Court Apartment, New Haven, Conn., Archie Young, builder. STEELTEX for Interior Plaster gives steel-reinforced construction to the strong, lasting walls and ceilings of this attractive apartment house. At the same time the heavy, fibrous STEELTEX backing adds insulation and sound-deadening.



Steel reinforcing completely embedded in stucco will protect the exterior of these modern apartments at Oakmont, Penna. The owner and builder, John McSorley, prominent building developer of Pittsburgh, Penna., is using STEELTEX in direct-to-stud construction. In addition to insulating and sound-deadening, the double waterproofed backing of STEELTEX for Stucco shuts out dampness.

STEELTEX

FOUR TYPES—SAME PRINCIPLE
SAME PROTECTION

for plaster . . for stucco . . for floors and roofs
(concrete and gypsum) for stone or brick facing.

DIVISION OF
Pittsburgh Steel Co.



Almost the whole impression your houses make from the outside may depend upon stucco. Reinforced with STEELTEX, as is being done by the builders of famous Laurelton Homes, Inc., at Laurelton, L. I., 2,500 homes are being built—and sold as fast as completed. STEELTEX for Stucco is also an effective and economical base for stucco overcoating.

America's great builders adopt reinforcing

Your prospects know that the hidden strength of steel reinforcing gives durability and permanence to great bridges, dams, and highways.

They are quickly interested when you offer them the same protection—steel reinforcing—in the houses you build with STEELTEX.

Show them how STEELTEX brings [the tested *reinforcing* principle right into the plaster walls and ceilings and stucco exteriors of homes and apartments. It strengthens the entire framework with a continuous network of welded steel fabric—completely embedded *steel*.

And the tough, fibrous backing of STEELTEX adds the important factors of insulation and sound-deadening—increased healthfulness and comfort.

More and more progressive builders are adopting reinforced construction with STEELTEX. A quarter of a million successful installations attest its economy and sales advantages.

Different weights of steel and different backings meet the requirements of different types of service—for reinforcing plaster, stucco, and overcoating, for floors and roofs of concrete and gypsum, for stone or brick facing. Write or send the coupon now for full details about STEELTEX.

National Steel Fabric Company
3103 Union Trust Building, Pittsburgh, Penna.

Without obligation send information about material I have checked.

- ☐ STEELTEX for Floors ☐ STEELTEX for Stucco
☐ STEELTEX for Plaster ☐ STEELTEX for Stone or Brick Facing

Name _____
Business _____
Street _____
Place _____



Pressure

What does it mean to Stained Shingles?

Pressure staining for shingles was developed and pioneered by Mauk three years ago. It was an advanced method then.

Now it is approved, accepted and widely imitated.

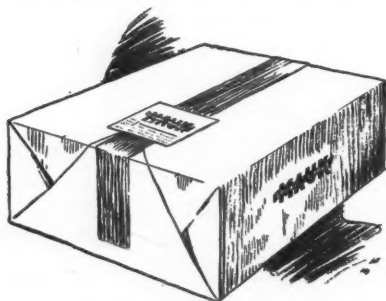
But it is wise to ask just what this pressure process is. How great is the pressure? How is it applied? What does it accomplish?

With Mauk it means that special basic stains are applied under *thirty-two tons of hydraulic pressure* to all clear, vertical grain, red cedar shingles. The shingles are then thoroughly dried and the process—using the same heavy stain and same pressure—is repeated.

This Mauk process is *patented*. As far as we know, after careful and extensive examination, it is the *only patented process* for staining shingles under pressure.

We have used it and will continue to use it to the *exclusion of any other manufacturer*.

To be sure you get real stained-under-pressure shingles, get Mauk Double Dipped Shingles stained under pressure.



Here is the way they are delivered. The package is an exclusive mark of identification. It protects you against substitution.

It protects the shingles against rough handling (and consequent breakage), dust, dirt and rain.



Shingles Stained Under Pressure

Here is the Mauk trademark displayed prominently on every package. There's no mistaking these better shingles. There's no excuse for accepting any substitute. Mauk shingles cost no more.

Despite the fact that Mauk shingles have *two coats of heavier stain applied under pressure*, modern machine methods keep their price down.

Get this book of shingle information and a portfolio of Mauk shingle-clad homes. Write for it.



It explains the Mauk process. It makes clear why the colors on the double dipped pressure stained shingles are more even, last longer, don't wash off and don't fade.

THE C. A. MAUK LUMBER CO.

Madison Ave., TOLEDO, OHIO

SPECIALTIES for Quick Sales and PROFITS

STANWIN CASEMENTS



Residence of B. Jacobson, Bronxville, New York, Geo. F. Root, Architect

A New Residential Window with more profit for you.

TO STIMULATE your sales, equip your houses with Stanwin Casements. This new window by Crittall is sturdy and quality-built throughout—yet low enough in cost to use profitably in all your residential jobs.

Houses designed with Stanwin Casements turn over quicker because they offer more advantages to buyers. These beautiful metal windows have a universal appeal and they provide comfort, convenience and protection which today's home owner demands—ease of cleaning and screening, freedom from sticking or rattling and weather-tightness.

Stanwin Casements are available in standardized units in both inward and outward opening types in a wide variety of sizes and designs. Considerably heavier than most steel casements in the lightweight class, with solid bronze hardware as standard equipment, they are offered at competitive prices.

Our new catalog on Stanwin Casements will be of value to you in making your houses easier to sell. Write for your copy today!

CRITTALL CASEMENT WINDOW CO.
10982 Hern Avenue • Detroit, Michigan

STANWIN CASEMENTS
NORMAN CASEMENTS
UNIVERSAL CASEMENTS

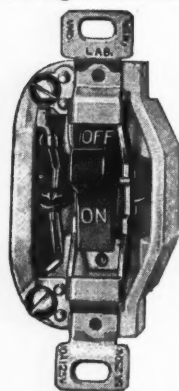
CRITTALL
CASEMENT WINDOW CO.
DETROIT, MICHIGAN.

Warehouse stocks at all central points. An opportunity is offered to a limited number of dealers.

WHAT'S NEW for the LIVING ROOMS *These Specialties Attract~*

Improved Toggle Switch

A NEW toggle switch, which is said to be a decided improvement in this field, has been placed on the market. This switch is not only extremely simple in construction, eliminating several of the parts used in the old style switch, but is also stronger and more durable. It is guaranteed for 10 years.



Simplicity of Construction Makes It Possible to Guarantee This Switch for 10 Years.

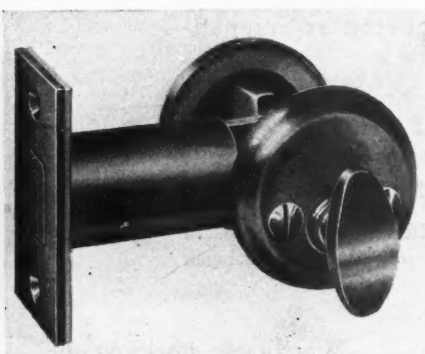
The simplicity of this switch lies in the construction of the yoke and the attachment of the blades to the laminated bakelite carrier plate. All washers and the ordinary fiber insulation are eliminated. In their place is a single piece of phenolic insulation.

The construction is such that the spring is in upright position and is the direct agent for moving the blades when the toggle is pushed. This provides unusually smooth operation. As the ordinary fibre insulation is not present, there is no swelling of these parts when becoming damp and consequently such troubles as loosened rivets and blades out of alignment are entirely eliminated. This new line is made in single, double, three and four point switches.



A Better Type Dead Bolt

WITH the rapidly advancing standards of home equipment, fixtures must not only be mechanically satisfactory in performance, but must also be more convenient, more artistic and more individual. The dead bolt illustrated here was designed to meet these requirements, by one of



A New Dead Bolt Which Is Both Mechanically Perfect and Artistic in Design.

complicated mortising, adjusting or assembling. It is only necessary to drill two holes, slip in the bolt, draw up on two

Starting with the January issue, the American Builder undertook a Specialties Campaign for the year 1929. This department is a continuation of that campaign with which, in accordance with our plan to make the campaign complete, authoritative and of the greatest constructive sales value, we have combined the department formerly entitled "What's New." In publishing this department we omit the names of the makers or sellers of the articles described. This information is, however, kept on file and will be mailed to anyone interested; address American Builder, Information Exchange, 105 W. Adams St., Chicago.

of the leading manufacturers of locks.

In this dead bolt all working parts are concealed within the door, only the small, artistic escutcheon being visible on the inside and the beautifully finished cylinder head on the outside. It is installed without

machine screws and fit the parts for the strike.

This bolt fits any door from 1½ to 2½ inches thick. It permits master keying and grand master keying. It fits either right or left hand door without any mechanical change. It is self-adjusting to door thickness and this adjustment is expedited and appearance further enhanced by ornamental metal rings.



Walnut Border Material for Oak Floors

NO part of the home is more important than the floors. Beautiful trim, walls and furnishings are necessary, but the floors reflect the quality tone of the entire house and form a base for the entire decorative scheme. Many experienced builders say that the floors sell the house. Oak flooring has long been

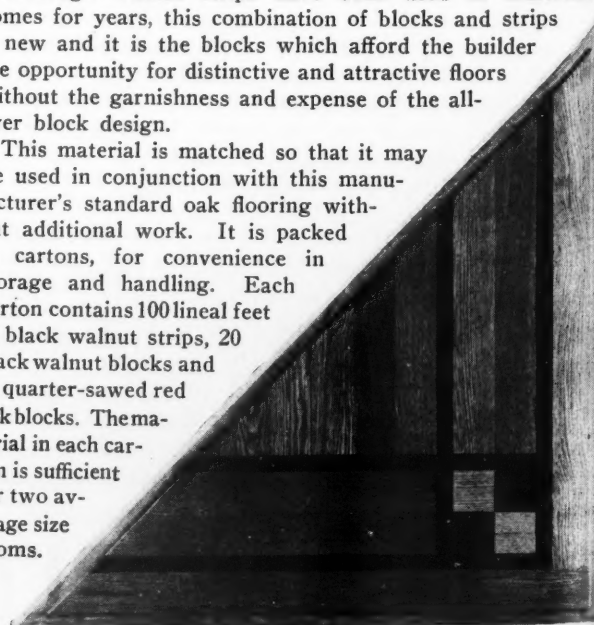
recognized as a material which meets the most exacting floor requirements and now there has been developed a flooring specialty, to be used with oak flooring, to lend new variety and interest to the floors. This specialty is a combination of black walnut blocks and strips used for borders.

The blocks are cut perfectly square and of a same face width as the standard flooring, 2¼ inches. The strips have a ¾ inch face. This material is used in conjunction with quarter-sawn oak blocks and standard oak flooring to form an infinite variety of border designs, at a small additional cost over plain oak flooring.

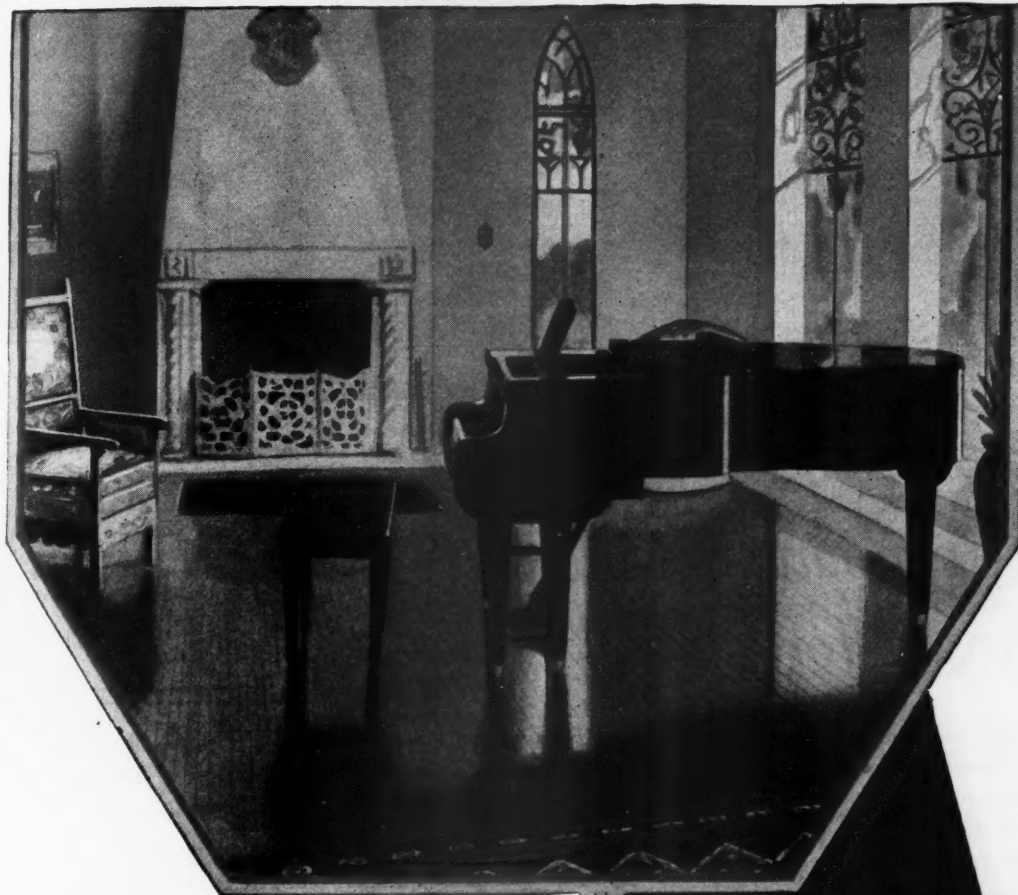
Although walnut strips have been used in individual homes for years, this combination of blocks and strips is new and it is the blocks which afford the builder the opportunity for distinctive and attractive floors without the garnishment and expense of the all-over block design.

This material is matched so that it may be used in conjunction with this manufacturer's standard oak flooring without additional work. It is packed in cartons, for convenience in storage and handling. Each carton contains 100 lineal feet of black walnut strips, 20 black walnut blocks and 10 quarter-sawn red oak blocks. The material in each carton is sufficient for two average size rooms.

One of an Almost Infinite Variety of Borders Possible by the Use of Black Walnut Blocks and Strips with Oak Flooring.



CHOOSE MAPLE . . . stain it any color!



Standard finishes
manufactured and
guaranteed only by
The Marietta Paint
& Color Co., Mari-
etta, O., and Murphy
Varnish Co., Newark,
N. J.

Pastel Green
Silver Gray
Early American
Royal Blue
Dove Gray
Spanish Brown
Autumn Brown
Natural
Seal Black
Orchid

Guaranteed Floorings

The letters **M F M A** on Maple, Beech or Birch flooring signify that the flooring is standardized and guaranteed by the Maple Flooring Manufacturers Association, whose members must attain and maintain the highest standards of manufacture and adhere to manufacturing and grading rules which economically conserve these remarkable woods. This trademark is for your protection. Look for it on the flooring you use.

M F M A

*Side and end
matched to per-
fection—Maple
makes a one-
piece floor of
lasting beauty.*

WHAT MAGIC beauty one sees today in homes floored with Northern Hard Maple! Here—a floor in soft gray. There—a floor in restful blue. A floor in rich, rare ebony . . . another in lovely orchid . . . each in perfect keeping with the color scheme of its room!

They are a new vogue—these enduring Maple floors in color. And any home may have them, at a moderate cost. With special, fadeless penetrating stains which a painter can apply right in the room, it is now possible to produce permanent colors of one's choice in this smooth, resilient hardwood flooring.

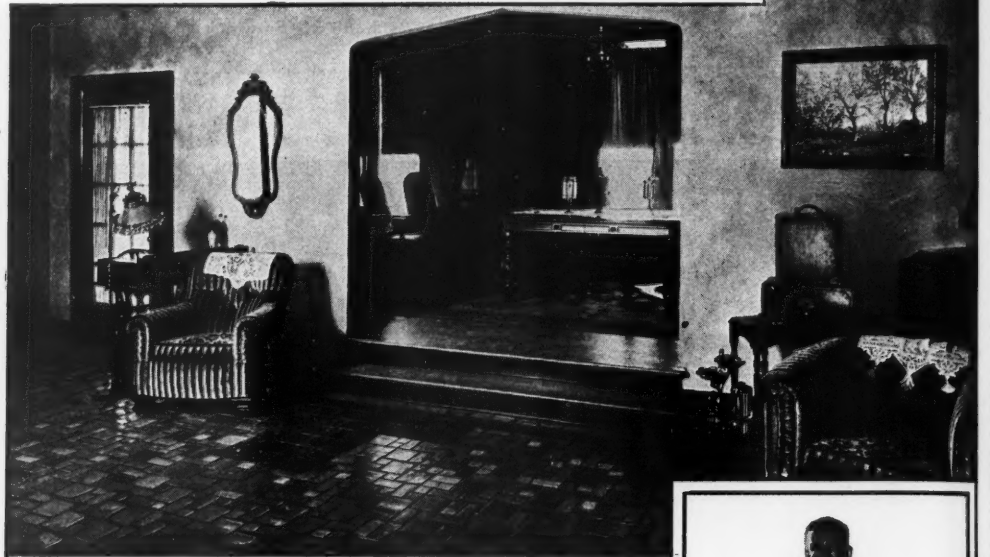
Supply this element of beautiful color in the homes and apartments you build—and provide in addition, the many other unique advantages which Northern Hard Maple offers. Our book, "The New Color Enchantment in Hard Maple Floors," shows page after page of the newest colorful interiors. May we send you a complimentary copy? Just write us.

MAPLE FLOORING MANUFACTURERS ASSOCIATION
1777 McCormick Building, Chicago

Floor *with* Maple

SPECIALTIES for Quick Sales and PROFITS

In the "House Ideal"



A view of the living room in Beaumont's IDEAL HOME. This distinctive floor demonstrates the charm which Ceramic Tiles lend to an interior

This Economical Material was chosen for several rooms

TO DEMONSTRATE to the city the very finest in beautiful and serviceable house construction, the building interests in Beaumont, Texas, have erected an *Ideal Home*.

It is significant to all builders that in several rooms, Ceramic Tiles—real tiles—were selected as the *ideal* wall and floor material.

In the entrance hall, a distinctive random pattern of Ceramic Tiles greets the eye. Truly a wise selection for this part of the house because Ceramic Tiles, so easily cleaned and so resistant to all sorts of wear,

can be kept fresh and attractive for the life of the building.

Again, in the living room—a delightful, two-storied interior—the floor is finished with Ceramic Tiles. Elaborate in design, it well demonstrates the great charm which this material adds to interiors. And the passing years will prove its economy—for a tile floor, properly laid, never needs repairing.

Bathrooms in the *House Ideal*—both walls and floors—are finished with beautifully colored Ceramic Tiles. Attractive, sanitary, water-

proof, easily cleaned, Ceramic Tiles ideally meet every requirement here.

In many ways, you can use Ceramic Tiles to help you sell houses faster . . . to bring you greater prices for your offerings. Use more of this attractive economical material in the houses you build. Your offerings will gain a true distinctiveness—that added something which lifts them out of the ordinary and results in bigger and quicker profits for you.

Consult your local tiling contractor for colors—patterns and textures.



YOU DERIVE the greatest benefit from Ceramic Tiles when the tiles are set by experts. Their skilled workmanship is instantly apparent. Select your tiling contractor on the quality of his work.

ASSOCIATED TILE MANUFACTURERS

420 Lexington Ave., New York, N. Y.

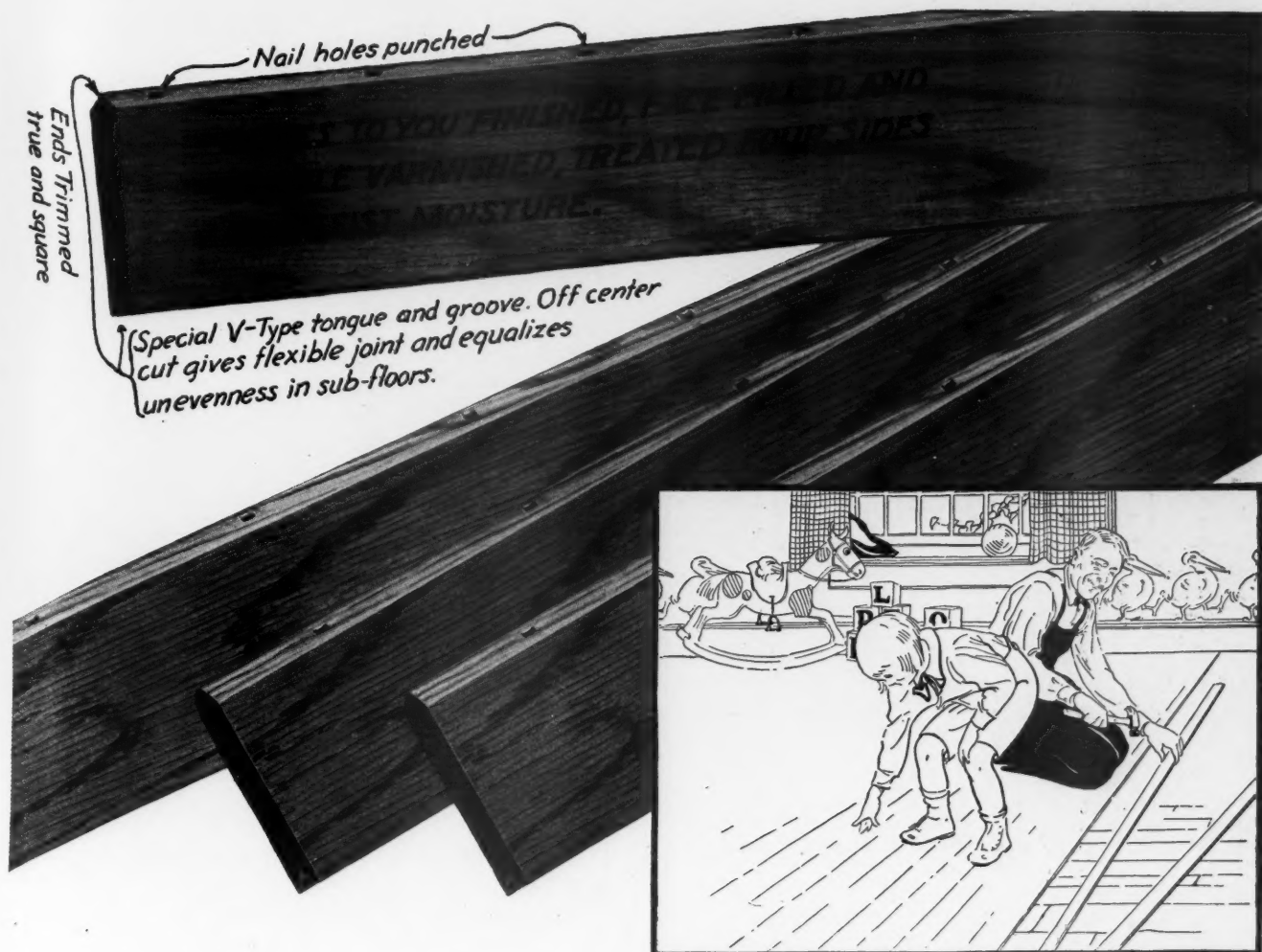
ALHAMBRA TILE CO.
AMERICAN ENCAUSTIC TILING CO., Ltd.
CAMBRIDGE TILE MANUFACTURING CO.
FEDERAL TILE COMPANY
FRANKLIN POTTERY
GRUEBY FAIENCE & TILE CO.

MATAWAN TILE CO.
THE MOSAIC TILE CO.
NATIONAL TILE CO.
OLEAN TILE CO.
THE C. PARDEE WORKS
ROSSMAN CORPORATION

STANDARD TILE CO.
THE SPARTA CERAMIC CO.
UNITED STATES ENCAUSTIC TILE WORKS
UNITED STATES QUARRY TILE CO.
WHEATLEY TILE & POTTERY CO.
WHEELING TILE CO.

K E R A M I C T I L E S

SPECIALTIES for Quick Sales and PROFITS



CROMAR makes it entirely unnecessary for you to sublet a flooring contract

ANY two of your carpenters can lay a CROMAR Factory Finished Oak Floor at the speed of a room a day. The completed job will be more perfect than the usual hand-finished floor—in respect to both the laying and the finishing. And the finish will long outlast the normal hand-finish.

You get the credit for the better installation—and you don't need to split your profit with anyone.

Here's why: CROMAR Oak Flooring is completely finished at the factory—scraped, sanded, filled, double varnished, and even treated to resist moisture—by MACHINES. CROMAR machines naturally can do a better filling job than can be done by hand—giving a much better surface for the coats of varnish. And those machines spread the two coats of varnish far more evenly than can be done by

hand. Furthermore, because powerful machines do the spreading, a larger amount of solids can be carried in the varnish—resulting, of course, in a much more durable finish of longer life.

When these completely finished CROMAR strips reach you (CRATED, not just bundled) there's nothing left to do but nail them down!

CROMAR makes a beautiful job. A job you can handle yourself from A to Z, whether on new buildings or relay work.



Write for free samples and complete literature concerning the manufacture, the selling and laying of the only Factory Finished hardwood flooring in the world.

THE CROMAR COMPANY,
Williamsport, Pa.

Pacific Greater West Distributor:
THE C. L. THOMPSON COMPANY
Offices and Warehouses:

200 Davis Street, San Francisco, California
324 N. San Pedro St., Los Angeles, California

CROMAR
FACTORY FINISHED
Oak FLOORING

Device Protects Home Entrance

THE illustration shows a device which is intended as a protection against thieves and other criminals gaining entrance to a house, when the woman of the house is alone, through the trick of pretending to be calling on a legitimate errand. It is a small metal door, installed in the entrance door and is ordinarily kept closed. If the door bell rings



With This Device Installed in the Entrance Door the Housewife Is Protected Against the Need of Opening the Door to Strangers.

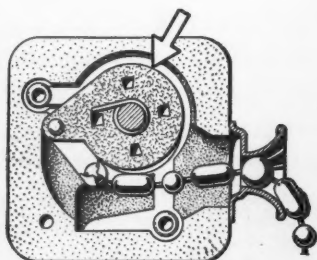
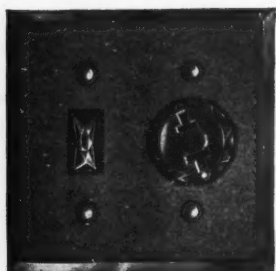
the housewife can first, before opening the door and giving an opportunity for entrance, open the small metal door in this device and see who is on the outside. If she is uncertain about the person there she can interview the caller through the device without opening the door and risking an intrusion.



Two New Electric Devices

TWO new devices have been brought out by a leading manufacturer of electrical equipment, which will add to the convenience of home lighting equipment. The first of these is the switch-tap and pilot light illustrated here. This one unit combines a switch, an outlet and a warning light. A plug may be inserted in the outlet which is then given a quarter turn to switch on the power. The jewel light is a constant warning that the light is on.

The second device is an improved type of pull socket, which is illustrated by the two detail views. It has a simplified mechanism which gives smoother action and trouble-free service. It has a one-piece porcelain body, a simplified ratchet mechanism and the commutator contact is from one piece of metal.



Left: A Combination Switch-Tap and Pilot Light for Radios and Remote Control. Right: An improved Type of Pull Socket.



Improved Type Windows

A NUMBER of distinctive features are claimed for the window shown in the accompanying illustration. In

the first place, both sash are in the same vertical plane, thus avoiding the dust-catching ledge at the meeting rail and making a pleasing panel effect with uniform depth of casement.

Either half or full length screens may be used without interfering with the window operation. The window cannot be forced from the outside nor thoughtlessly left unlocked when closed. It is locked when in the ventilating position, making it safe for children.

The circulation of air for ventilation is upward, preventing direct drafts into the room and excluding rain and snow from blowing in when the window is so adjusted. When desired, in hot weather, practically a full window opening can be secured.

These windows, in wood or metal construction, are suitable for residences, apartments, commercial buildings, public and semi-public buildings of all kinds.



Ease of Cleaning, Perfect Ventilation and Weathertightness Are Features of This Window.

Panels of Asbestos and Cement

ANYONE would think that the room in the accompanying picture was finished in expensive wood paneling, but, as a matter of fact, it is finished in a new material which very closely resembles wood paneling, giving the finest architectural effects, but costing much less.

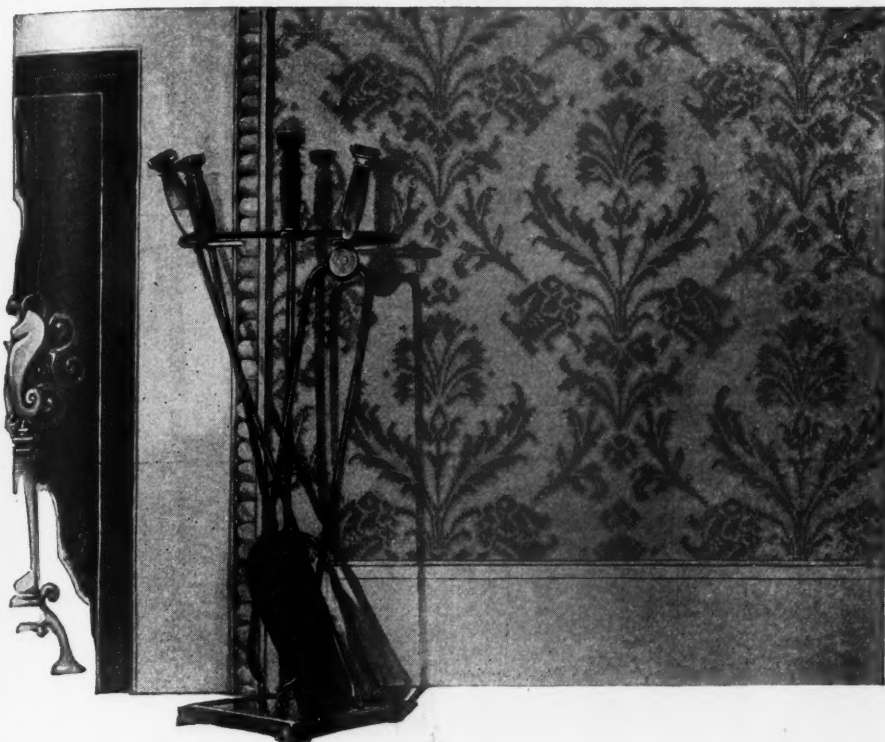
This new material is described as having the appearance of wood and the fire-resistance, strength and permanence of asbestos and cement, of which it is made.

This material is made in panels of varying sizes to fit installation conditions, in authentic period designs and also in plain "lumber" and in interior trim. It can be sawed and planed, like wood, for fitting and is installed over furring strips with flat headed wood screws.



Asbestos and Cement Have Been Moulded Into Panels Which Give, at Low Cost, a Remarkable Reproduction of Hand Carved Wood Paneling.

SPECIALTIES for Quick Sales and PROFITS



Before You Decorate find out about Sanitas

Sanitas is offered in 150 styles, for every room in the house, for the simplest or most elaborate decorations.

It is made on cloth; the surface is finished in durable oil colors that do not crack, peel or fade. Cleanable, too—simply wipe off the dirt with a damp cloth.

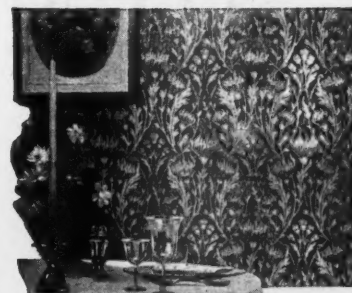
Can be hung on new walls as soon as the plaster is dry. Works equally well over composition boards, on walls and ceilings.

Sanitas has been used in apartment houses, hotels and homes throughout the civilized world for more than a quarter of a century. It is not an experiment.

In addition to the ready-to-hang styles of Sanitas, there are Sanitas lining fabrics which are used as foundations for plastic paints, graining, marbling, fresco work, blending and hand decorations. These fabrics prevent wall and ceiling cracks from showing through costly decorations.

Sanitas is nationally known, it is advertised to consumers in twenty-five publications with a national circulation of fifteen million copies monthly.

Architects, Builders and Decorators are invited to write for the large Sanitas Sample Book containing the complete line. Write on your letterhead, please, and mention wholesaler's name.



DINING ROOM



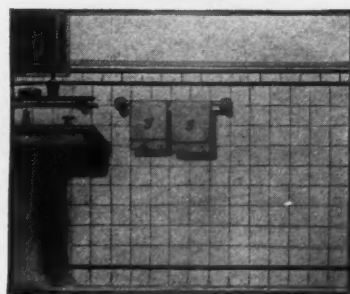
BEDROOM



HALL



KITCHEN



BATHROOM



**THE STANDARD TEXTILE
PRODUCTS CO.**

320 Broadway Dept. 51 New York



Look for this
trademark on the
back of the goods

Send for this Sample Book



SPECIALTIES for Quick Sales and PROFITS

TO MAKE THEM WANT OAK FLOORS

This advertisement, in four colors, appears in *House and Garden* and *House Beautiful*.

Here is a charming harmony of cool creams and blues with the warm, rich tints of oak . . . a house to live in . . . a friendly house



OAK FLOORS—THE FOUNDATION OF GOOD DECORATIVE STYLE

They can be laid all through the house for less than ordinary carpets cost

Is yours one of those houses, attractive in other respects, that miss the perfection of gracious charm because they are not floored with oak? Do you feel the lack of that richly harmonious groundwork when you arrange your rooms? Are you proud of your floors?

Perhaps you don't realize how little it now costs to put in oak floors—whether you are building a new house or remodeling. You can have them laid for less than you would ordinarily pay for carpets or other perishable floor coverings. And this means a finished and polished job. The oak floors can be put down over your present floors. You are only deprived of the use of a single room at a time—and the entire job takes but a few days. Ask your architect, contractor or retail lumber dealer to give you a definite

estimate and show you the attractive finishes modern oak will take.

Think of the difference oak floors would make right now in your home! Not only in appearance. But how much easier to keep spick and neat. Dustless, smooth and sanitary. Oak floors, properly laid, will make your home quieter as well as cleaner.

Floors of oak are enduring. Whether you buy or build, they are worth many times their cost in sheer satisfaction because they contribute so much to the comfort and livability of a home. And actually they'll add to the value of your house—should you ever decide to sell or rent it. Oak floors lend themselves to any type of floor covering. Whatever

your interior decorative scheme, you can't go wrong if you make oak floors the foundation.

You never grow tired of friendly, polished oak. The cheery gleam of its surface gives your rare old furniture a perfect setting. And like fine furniture, an oak floor grows mellower and more beautiful with age.

Let us send you literature about oak flooring—also advice on any flooring problem. This advertisement is one of a series being

published by the OAK FLOORING BUREAU, 1246 Builders' Building, Chicago. A bureau maintained by the oak flooring industry for the benefit of home builders.

OAK FLOORS

*... the mark
of a
well-built house*

**OAK FLOORING
BUREAU
1238
Builders' Bldg.
Chicago, Ill.**

THIS advertisement does only one thing, but does *that well*. It sells Oak Floors. It educates the public to lay Oak Floors whether they are building a new house or remodeling an old one. It appeals to their business sense by showing them that Oak Floors add definite value to a house. It is giving the building industry a widened market for Oak Flooring. The Oak Flooring Bureau maintains a technical staff which is always ready to assist in any flooring problem.



How to Build Beautiful and Successful Fireplaces

EVERY FIREPLACE being built today can be both beautiful and successful. This is true in spite of the fact that 85% of the fireplaces in homes today cannot be used for burning an open fire. Beauty in a fireplace is more easily attained than successful operation, but there is no reason why every fireplace should not be both beautiful and successful. It's a question of proper construction.

The Donley Book of Successful Fireplaces, the most complete and up-to-date fireplace guide on the market, contains sixty fireplace designs that will satisfy nearly any home owner. It also contains complete construction plans and details and illustrations of the proper Donley Equipment to use, including Donley Fireplace Dampers, Ash Dumps, Steel Angles, Ash Pit Doors, Fire Baskets, etc.

Remember that a successful fireplace costs no more than a poor one. It only involves the use of simple, easily understandable plans and information. Build your fireplaces according to Donley Construction Plans, using the above Donley Equipment. The satisfaction of your clients will make a reputation for you as a fireplace builder.

THE DONLEY BROTHERS COMPANY
13910 Miles Avenue Cleveland, Ohio

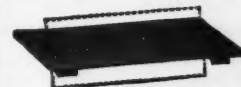


Get this Book Containing 60 Fireplace Designs

When your customers want to see fireplace designs show them the 60 designs in the Donley Book of Successful Fireplaces. These designs cover living room, dining room, bedroom and porch fireplaces and use brick, stone and wood, as well as combinations of these materials in their construction. This fireplace handbook is worth several dollars, but any builder can get a copy by sending 25 cents to cover the cost of mailing.



Donley Damper



Ash Dumps



Ash Pit Doors



Fire Basket

THE DONLEY BROTHERS COMPANY
13910 Miles Avenue, Cleveland, Ohio

Gentlemen:

Enclosed find 25 cents covering the cost of mailing the Donley Book of Successful Fireplaces.

Name _____

Address _____



WHAT'S NEW

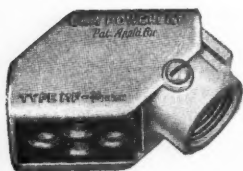
for the BASEMENT

Specialties With Sales Appeal

Improved Power Outlet

EASE of assembly, maximum wiring space and only one locking screw are the outstanding features of a new power outlet fitting which has recently been placed on the market and which is illustrated here. To assemble

this fitting is only necessary to screw the base onto the conduit. When the cap is removed, the wires can be pulled through the conduit with a straight line pull. The wires are passed through the cover and



This Power Outlet Incorporates Several Improved Features.

the cap replaced. The cover is so placed that the wires can readily pass through the holes without extreme bending. One brass screw, which is not removable and cannot be lost, locks the cap cover and base firmly together.

The cap is shaped so that a maximum of space is provided to accommodate the bend which must be made in the wires when the cover and cap are assembled. The cap is designed to mount in vertical or horizontal position without removing the composition or twisting the wires. The covers have two holes and two knockouts, permitting the use of two, three, or four wires. The edges of the cover are enclosed within the metal cap and protected against possible breakage. This fitting is made in $\frac{1}{2}$, $\frac{3}{4}$, 1, $1\frac{1}{4}$ -inch sizes, galvanized finish. It is listed as standard by the Underwriters' Laboratories.



Handy Clinker Tongs



A Simple Tool for Removing Clinkers from the Furnace is a Useful Addition to the Heating Equipment.

THE handy clinker tongs shown here make the care of the furnace much easier and can well be added as a regular part of the heating equipment. They are neatly and well made

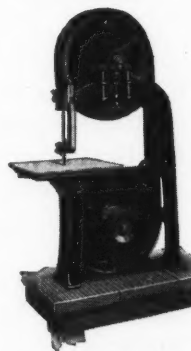
and are practically indestructible, it is stated. They are made of hot rolled, welded tubing with a fixed jaw which is a stamping and a movable jaw of cast steel. A cold rolled rod extends the entire length of the tubing and operates the movable jaw against a compression spring

near the handle. The movable parts are encased in the tubing making the tongs neat in appearance and eliminating protruding parts which might interfere with the operation. The whole tool weighs only two pounds. Its use eliminates much of the hard work of tending the furnace when clinkers accumulate and reduces the dust and dirt.



Complete Workshop

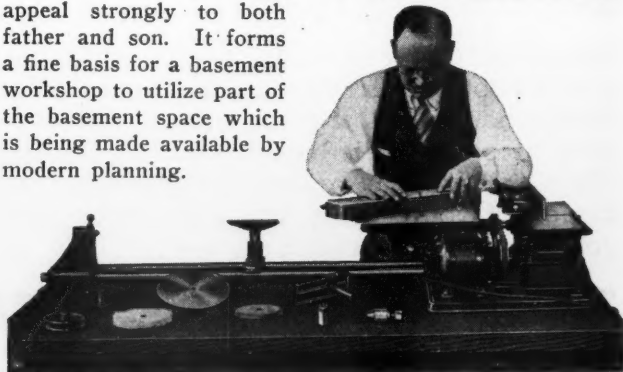
WE hear a great deal about equipping the home



A Band Saw, Too, Can be Made Part of the Home Workshop.

with specialties which will make a special appeal to the women, but very little about specialties which make a special appeal to the men. While it is generally accepted that women are the biggest factor in the buying of homes, the men still have a voice in the selection and the builder can not afford to ignore their special tastes and needs. A few specialties that appeal to the men will be a real help in selling.

Men have always been interested in tools of all sorts and many of them take great interest in working about the house, making novelties and garden furniture, attending to repairs, etc. They pride themselves on their ability to make things. Then there is the boy of the family. Almost every boy likes to work with tools and he should be encouraged by being given good tools to work with. It is a fine sort of training. The tool set shown here will appeal strongly to both father and son. It forms a fine basis for a basement workshop to utilize part of the basement space which is being made available by modern planning.



A Home Workshop Equipped with This Set of Small Power Tools Makes a Good Selling Point When Talking to the Man of the Family.

SPECIALTIES for Quick Sales and PROFITS



"And it's equipped with
DURO!*"*

The house is a dream, delightfully arranged and equipped with the most modern conveniences. But the exquisite beauty of its architecture did not blind the prospects to the quality of the equipment in the basement. The plumbing was carefully and intelligently inspected, and when they saw the Duro Water System and the Duro Water Softener they were further impressed.

The average home buyer appreciates quality equipment, and when he sees the name Duro he knows that you have installed the best that money can buy.

Duro Water Systems are unfailingly bringing the comfort of fresh running water under uniform pressure to suburban and country homes—automatically, noiselessly, without care or attention.

The Duro line is complete. No matter how difficult the installation, there is a Duro Water System to meet your requirements.

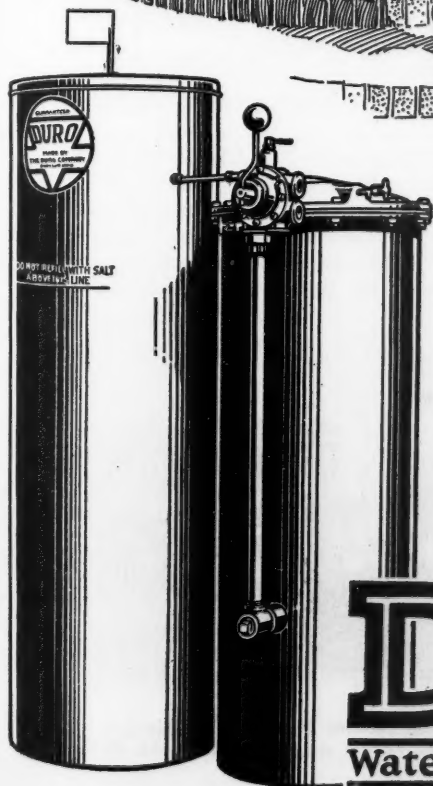
Duro dealers and branch offices have factory trained men to estimate on your needs and help you on any installation.

*Write for New Duro Catalogs on
Water Systems and Water Softeners*

THE DURO COMPANY

103 Monument Ave.

Dayton, Ohio



**DURO
WATER
SOFTENERS**

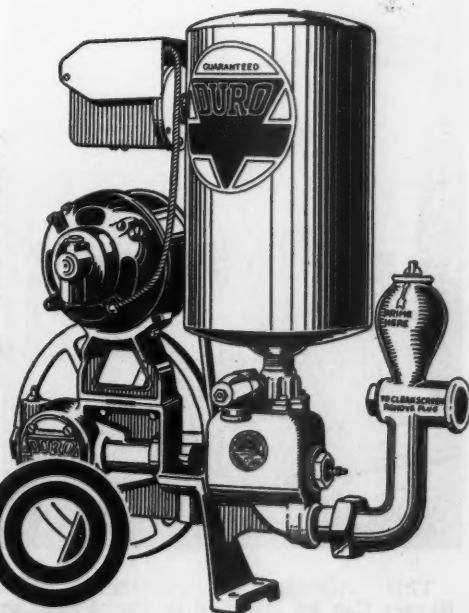
A Duro Water Softener is the most appreciated convenience you can install in the hard water home. There are three types of Duro Softeners—the Automatic, the Semi-Automatic (here illustrated) and the Hand-Operated. The list f. o. b. factory price of the latter is

\$76⁵⁰

**DURO
FRESH FLOW
SYSTEM**

The No. 250 Duro Fresh Flow Water System stands out sharply as the supreme water system value for builders. A complete, electric, automatic water system — 250 gallons per hour capacity. List price, f. o. b. factory, only

\$69⁵⁰



DURO

Water Systems ~ Water Softeners

A Gas Fired Incinerator

THE appearance of the modern basement is quite a contrast to that of a few years ago. Heating plants that are attractive in appearance, that do away with dust and dirt or are segregated from the main portion of the basement, together with incinerators that eliminate baskets and boxes of rubbish, have made available a clean livable space in the basement which increases the size of the house at low cost. Not only is the incinerator an essential feature in the greater use of basement space, but it also means more

sanitary living conditions and is one of the pieces of equipment that is demanded by the modern home buyer.

The incinerator shown here is of the gas fired type. It cremates refuse of all kinds, including wet or dry garbage, into a pure powdery ash, in a few minutes. It uses the oxygen principle, making it, as claimed by the manufacturers, exceedingly economical to operate. It is attached to the main stack and does not require an extra chimney. It is so moderately priced as to make it universally popular.

The makers of this incinerator point out that,

from the standpoint of investment, its price, together with the cost of a dirtless heating plant, adds 300 square feet of additional space to the six or seven room house at about 25 per cent of the cost per square foot of the original room area.

Besides the addition of space which makes possible a recreation or billiard room, children's play room or some-

thing of the sort, the home owner is afforded, by such an installation, the convenience and comfort of automatic and sanitary appliances which lighten the burden of the home-keeping.



Gas Burner Converts Any Heating Plant

RAPID strides made during the past few years in heating homes

with gas have created a growing demand for this type of clean, dependable heating, free from labor and attention. Many houses, however, are already equipped with coal burning steam, hot water or warm air heating plants which represent too great an investment to be discarded. By means of the equipment shown here, any of these heating plants which are correct and of such a design that they can economically utilize gas for heating, can now be converted into gas burning systems, at a low cost.

This equipment consists of a specially designed burner, having both primary and secondary air control, which is attached to the furnace or boiler without disturbing it in any way. After the heater has been thoroughly cleaned, the grates are covered with asbestos mill board to prevent air leaking into the fire pot and this asbestos is covered with about three inches of sand to thoroughly insulate the bottom.

A burner sleeve is then bricked into the feed door opening, to which the burner is bolted, and through which the intense burner flame enters the fire pot.



Home Electric and Water Plants

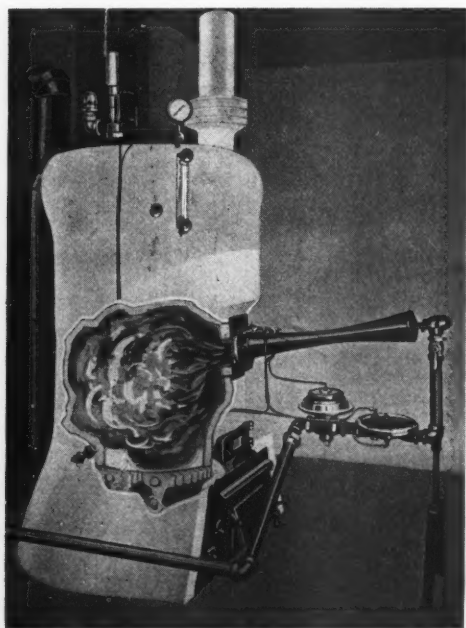
COMBINING the desirable features of the automatic and the battery charging types of individual electric plants, the new 750 watt model illustrated here is ideal for rural and suburban homes requiring a dependable and self-contained source of electric current. Operating with gasoline for fuel, the engine is directly connected with the generator and provides power and lighting current for 32 volt service.

When only a few lights are needed, current is drawn from the batteries, but when heavier power loads, such as a number of lights, an electric refrigerator or similar appliance, are turned on, the engine automatically starts and provides current direct from the generator.

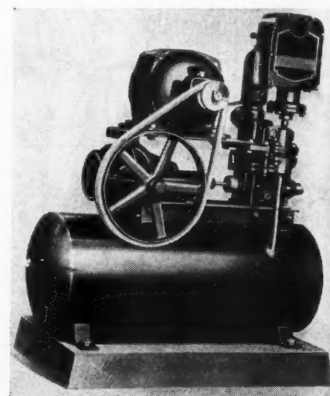
Companion equipment to the individual electric plant is the residence water system, also illustrated here. This model, recently developed, has an hourly capacity of 225 gallons. This model is a 1/6 horsepower, belt-driven, shallow well type, adapted to use with a well or cistern in the rural or suburban home.



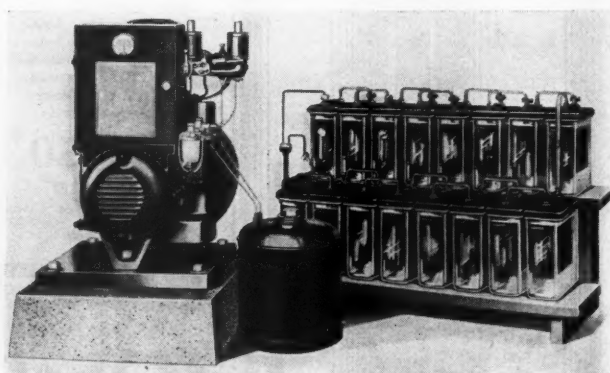
A Clean Burning, Gas Operated Incinerator Which Is Economical in Operation.



This Automatically Controlled Gas Burner Can be Installed in Any Steam or Hot Water Boiler or Warm Air Furnace at a Low Cost.



The Residence Water System Is Companion Equipment for the Individual Electric Plant.



Rural and Suburban Homes Beyond the Electric Power Lines Can Now Be Equipped with This Efficient, Individual Electric Plant.

SPECIALTIES for Quick Sales and PROFITS



"I'd like it
if it had
**RUNNING
WATER**"



RUNNING WATER is a sales feature *A Complete Shallow Well System for Only \$70*

It is the feminine side of the partnership that has the final say on which home they will purchase. And you can safely bet that she will insist on **RUNNING WATER**. No one blames her, of course, but many a sale has been ruined because the woman won't put up with pump-and-carry drudgery.

The wise contractor or builder always includes this feature. The slight additional cost is more than offset by the increased ease of sale and the better price obtainable.

Whether you build a home for personal residence or for resale, the investment in a Fairbanks-Morse Home Water System will bring big returns. Write for booklets, giving full information and practical installation helps.

FAIRBANKS, MORSE & CO., Dept. H3, 900 S. Wabash Ave., Chicago
Branches and Service Stations Covering Every State in the Union



EQUIPMENT for any water service problem

In the complete line of F-M equipment you can find the solution to any water service problem, regardless of source of water supply or kind of power available.

A complete system for only \$70

cash, f.o.b. factory. Capacity, 210 gal. per hour. Complete with motor for 60 cycle or direct current. A 420 gal. per hour size for \$100. Both systems for use where source of water is not more than 22 feet below the unit.

FAIRBANKS-MORSE **Home Water Systems**

Fairbanks-Morse Products



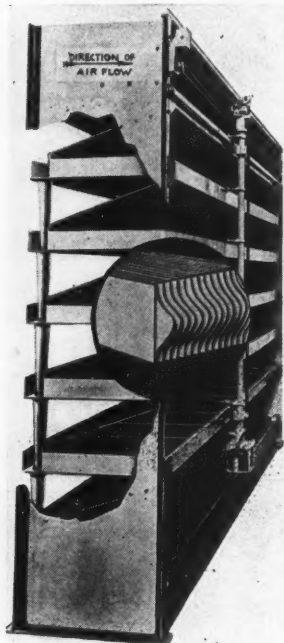
"Every Line a Leader"

FAIRBANKS, MORSE & CO., Dept. H-3
900 S. Wabash Avenue, Chicago
Send your **FREE** Home Water Service Booklets and Special
Circular giving full details about the New F-M Home
Electric System.

Name.....
Address.....
Town..... County..... R. F. D.....
My source of water supply is:
☐ Shallow Well ☐ State
☐ Deep Well ☐ Lake
☐ Spring ☐ Stream
☐ Cistern

Air Filter Capacity Increased

THE cleaning of air for hygienic or industrial purposes is still a comparatively new science, but one which is very rapidly being developed and applied. To take any



This Air Filter Incorporates a New Type of Filter Medium Which Greatly Increases Efficiency.

air filter of recognized standing, after a decade of widespread experimentation, and double its capacity without increasing resistance or decreasing efficiency, has been a goal hardly expected to be reached. Yet that is what the manufacturers of this filter state that they have done. This has been accomplished by means of a new "sinuous" filter medium.

Most, if not all, of the commercially successful air filters operate upon the centrifugal principle of dust elimination, it is stated. A viscous coated baffle, inserted in the path of the air, forces that air to change direction and brings centrifugal forces to bear on the heavier-than-air particles, driving them against the oily surface of the baffle, where they are caught and held.

With the new filter medium the cleaning capacity is 96 to 99 per cent, guaranteed. The resistance is 0.25" W. G.

In these two characteristics there is very little difference between this and other types of filter. Here, however, the similarity ceases, it is said. The capacity per space unit occupied is much greater for the new filter, each cell being conservatively rated at from 3,000 to 3,500 C. F. M. Because the capacity is greater the cost of the filter is less, both first cost and maintenance.

With this new medium the field of filter application is greatly extended, it is stated. Where the cost of filtered air formerly prohibited its use, it is now available at a figure so low as to make it desirable.



A Basement Fed Incinerator

ONE of the leading manufacturers of incinerators has recently brought out a basement fed incinerator which



An Incinerator of Well Known Make Which Has Now Been Adapted to Basement Feed for Houses Already Built.

makes this modern household accessory available for old homes as well as new homes, without expensive and costly remodeling. The new model can also be used for houses which do not have a basement by building onto the outside of the house.

This incinerator can be installed, it is stated, at a surprisingly low cost. It will eliminate the garbage can nuisance and the bother and danger of burning rubbish in the yard. It provides a large capacity for rubbish of all kinds, not only garbage, but also cans, bottles, sweepings, old magazines and papers can be dropped into it as rapidly as they accumulate. They are deposited through a hopper door placed in the upper part of the brick combustion chamber, as shown in the illustration. This combustion chamber holds about six bushels, sufficient capacity for a five or six room house. It is equipped with a patented by-pass flue and vertical grate which assures complete and odorless combustion. No gas or other commercial fuels are required.



Boiler Attractively Enameled

THIS, recently introduced, boiler has a round metal jacket and a thick blanket of mineral wool insulation. It is built on the same principles as the other round boilers made by this well known company, which have proved successful over a period of years. It is cloaked in a cobalt blue jacket capped with cardinal red. The finish is heavy enamel, baked on, over a first coat of water-proof enamel, also baked on.

The base is also jacket covered, made out of rust resistant iron, with two coats of baked enamel. The jacket is fastened on by an ingenious arrangement of connecting cleats which makes it easily and quickly installed.

The insulation comes in the form of a one piece blanket of thick mineral wool between wire meshing, with all openings cut out. It is installed by simply placing around the boiler and fastening with wire.

The trimmings are finished in black enamel and nickel plate. All the doors are finished in vitreous porcelain enamel, a smooth, thick, mirror-like finish, in cardinal red. The fire door handle is nickel plated as are all screws and bolts. The base front and smokehood are finished in a black enamel which will stand an extremely high temperature without peeling or discoloring.

This boiler is furnished in guaranteed heat capacities of from 200 to 925 square feet actual radiation in steam and from 330 to 1,525 square feet in water. It is also furnished in oil-burning type.



Here Is a Boiler of Well Known Make with a Jacket Finished in Baked Enamel and Insulated with Mineral Wool.

SPECIALTIES for Quick Sales and PROFITS

Chase & Co.
KICK OUT
GARBAGE
CANS



These beautiful homes on Maple Ave., Silver Spring, Maryland, were built by Chase & Co., and are equipped with Kernerators of which Mr. Volney O. Chase speaks so highly.

CHASE & CO.

EDWARDS BUILDING
1416 H ST. N. W.
WASHINGTON, D. C.

December 3, 1928.

Kerner Incinerator Co.,
Milwaukee, Wis.

Gentlemen:

I have been putting Kernerators in all houses which I have built and for which I have drawn plans for the past eighteen months, and from practical experience give them my most hearty endorsement.

I believe that regardless of whether the residence is located in city or rural community an incinerator is one of its most valuable assets both from the standpoint of convenience and sanitation.

In the new development of Ardnavue, Maryland, for which I am supervising the architectural and construction work for the Ardnavue Development Corporation, all residences will be equipped with incinerators.

Trusting that this recommendation will serve to introduce others to the conveniences of the Kernerator, I remain,

Sincerely yours,

V. O. Chase

WITHOUT Kernerator incineration no home can be called "modern". Housewives are demanding relief from the filthy garbage can and successful developers find that the Kernerator is a selling feature very profitable to include.

Any new home can have the Chimney-Fed Kernerator, with handy hopper door in or near the kitchen. Homes already built and new homes in which the chimney location is inconvenient, should have the Basement-Fed model. The cost is but little more than for the portable gas fired incinerator of half the capacity and the savings in gas pay for it in a few years' time. Five or six room residence model \$90. Masonry about \$50 additional.

Write for complete information and prices or phone your nearest Kernerator representative. Offices in 89 cities.

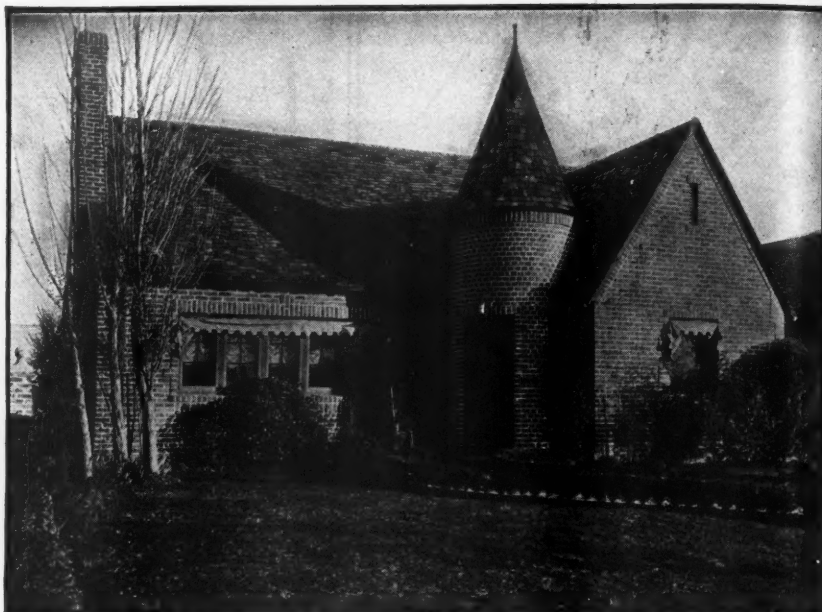
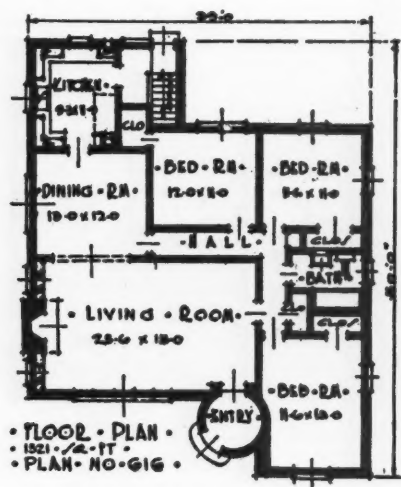
KERNER INCINERATOR CO., 753 E. Water St., Milwaukee, Wis.

KERNERATOR
REG. U.S. PAT. OFF.
INCINERATION

*Garbage and Waste Disposal
for New and Existing Buildings*



SPECIALTIES for Quick Sales and PROFITS



Wouldn't You Like to BUILD THIS HOUSE?

JUST picture it set upon one of your lots. See how homely it nestles to the earth and how naturally. It is one of those rare designs whose charm grows upon one, one of those happy bits of architecture which blends with trees and shrubs and growing things.

The name of the house is "The James," and you may have complete plans and specifications for it at the very modest price of \$12.00.

These plans are from a service created by the Common Brick Manufacturers Association under skilled architectural supervision. They are not sold for profit or for gain, but as a service.

We are able to offer many of them to Master Builders. Our booklet, "Homes of Lasting Charm" (25c), contains photographs and block plans of 120 houses that are quick to move and easy to sell. "Beautiful Homes" (25c), from which "The James" is taken, shows 31. Besides these publications we have much other literature of value in your building. The price is so very nominal we suggest you send today for all that is listed in the coupon.

COMMON BRICK MANUFACTURERS ASSOCIATION OF AMERICA
M 2131 GUARANTEE TITLE BUILDING CLEVELAND, OHIO

Clip and Mail This TODAY

Without charge, please send me a copy of "Common Brick."
I am enclosing cash or stamps for the booklets checked.

- | | |
|--|--|
| <input type="checkbox"/> "Homes of Lasting Charm" 25c. | <input type="checkbox"/> "Multiple Dwellings of Brick" 10c. |
| <input type="checkbox"/> "Beautiful Homes" (1 story) 25c. | <input type="checkbox"/> "Farm Homes of Brick" 5c. |
| <input type="checkbox"/> "Skinted Brickwork" 15c. | <input type="checkbox"/> "Brick, How to Build and Estimate" 25c. |
| <input type="checkbox"/> "The Heart of the Home (Fireplaces)" 25c. | |
- (Enclose \$1.25 if you want all the books)

BRICK

beauty forever

These District Association Offices and Brick Manufacturers Everywhere are at Your Service:

Boston	11 Beacon Street
Chicago	228 No. La Salle St.
Cleveland—Ohio Assoc.	2124 Guar. Title Bldg.
Denver	1735 Stout Street
Detroit	400 U. S. Mortgage Trust Bldg.
Hartford	226 Pearl Street
Los Angeles, Calif.	634 Chamber of Commerce
New York City	1716 Grand Cent. Term.
New Orleans, La.	727 Canal Bank Bldg.
Norfolk	112 West Plume Street
Philadelphia	1420 Walnut Street
Pittsburgh	524 Fourth Avenue
Raleigh, N. C.	508 Com. National Bank Bldg.
Salt Lake City	301 Atlas Block
San Francisco	461 Market St.
Seattle, Wash.	913 Arctic Building

A Sub Which Four P

WHAT'S NEW

for the KITCHEN

up-to-date Salable Specialties

A Built-in Breakfast Nook

A MANUFACTURER of many years' experience in the production of fine furniture has placed on the market a complete breakfast nook equipment which may be built into the wall of the kitchen, dining nook space or dining room so that it is completely out of the way when not in use, but provides comfortable seating for four persons. This unit makes possible a breakfast nook at a surprisingly low cost. The table and benches are of five-ply gumwood, the back of three-ply gumwood and the case of one inch hardwood. It can be finished to match any decorative scheme and requires no re-sanding before finishing.

This unit is easily opened and closed as the moving parts are counterbalanced in such a manner that the slightest pull on the handle-rings will silently swing the table and benches into place. The use of 18 gauge steel guideways, tested to hold more than twice the weight they will be required to carry, make a sturdy and rigid unit. The unit fits into standard four inch studding, flush with the wall and it is only necessary to nail the frame of the unit to the studding to install.

The table and bench extend 38½ inches from the wall when open and the table top measures 41 by 23½ inches. The total rough opening required for installation is 56½ inches wide from side to side and 47 inches high from top to bottom.

For homes that are already built, and where the cost of remodeling must be avoided, a similar unit that can be installed against the wall is available. This unit is like that



A Substantial and Attractive Unit for the Breakfast Nook, Which Is Flush with the Wall When Not in Use, Seats Four Persons Comfortably.

Starting with the January issue, the American Builder undertook a Specialties Campaign for the year 1929. This department is a continuation of that campaign with which, in accordance with our plan to make the campaign complete, authoritative and of the greatest constructive sales value, we have combined the department formerly entitled "What's New." In publishing this department we omit the names of the makers and sellers of the articles described. This information is, however, kept on file and will be mailed to anyone interested; address American Builder, Information Exchange, 105 W. Adams St., Chicago.

already described except for the necessary difference in the case. It is supplied in beautifully grained walnut or in shades of Venetian green or gray lacquer.



Package Receiver Locks Automatically

EVERY new home should be equipped with a package receiver which can be installed, when building, at a small cost. Old homes, too, can be supplied with this convenience, the installation requiring only a few hours work by carpenter or mason. With such a receiver as illustrated here, which is in reality a neat little wall safe for taking care of deliveries, milk and grocery deliveries are safe from prowling dogs and cats and from petty thieves.

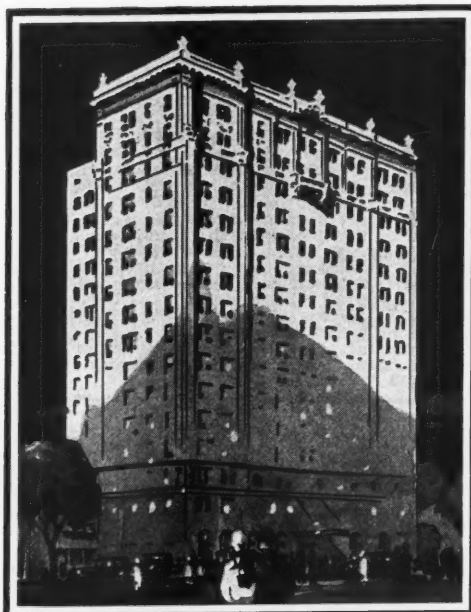


Protection of Deliveries and Convenience for the Housekeeper Are Provided by This Built-In Package Receiver.

Newspapers placed in the receiver will not get wet or be blown away. The housewife is relieved from answering the door for deliveries when she is busy otherwise and it is not necessary for her to leave the door unlocked, or else stay at home, when she wants to go out but is expecting deliveries. Delivery men need not come into the house and the tracking of muddy feet is eliminated, as is also the danger of crooks posing as delivery men to enter the house.

This package receiver is made of steel. It locks automatically when the door is closed. Opening the inside door releases the outside lock ready for the next delivery. It is made in three styles. All of these measure 14½ inches wide by 11½ inches high. The size fits between 16 inch centered studding and the height of four laid bricks. The inside frame in each style is 16¾ inches by 14½ inches. Two of these styles have an over-all front to back measurement of nine inches, one having a left side hinge, the other a right side hinge. The third style is six inches deep and has a reversible hinge.

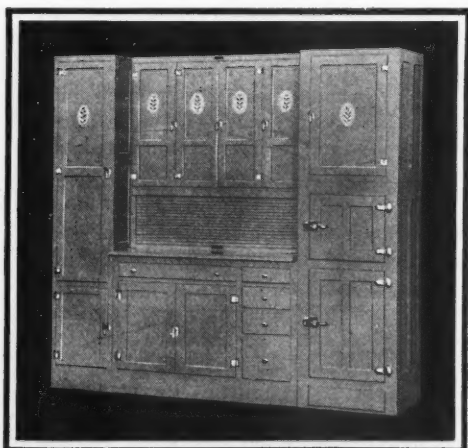
Why Sellers Kitchen Furniture Units were chosen for St. Louis' most beautiful apartment building



THE HAWTHORNE

4481 West Pine Boulevard, St. Louis, Mo.
James Black Masonry & Contracting Co., Builders
Pleitsch and Price, Architects
Edmu Realty Company, Owners
H. C. Morrison Co., St. Louis Representatives

"But the kitchen, here is where efficient planning has been expended. Here are none of the old type gas ranges, here are none of the old style inefficient cabinets but a cabinet designed by kitchen experts, a cabinet constructed by furniture makers, a cabinet decorated by interior decorators, containing all the appointments, all of the niceties and all of the heretofore lacking necessities which go to make housekeeping a pleasure. The cabinet also contains your refrigerator built in and sealed in . . . and every apartment has installed between the kitchen and the dining room a *china closet* built by the same manufacturer."



A Typical Sellers Installation

The preceding quotation from the architect's own write-up of this beautiful, new, ultra-modern apartment building, tells most vividly the story of Sellers flexibility, Sellers versatility and desirability. Little can be added

to it. And it is told in a manner typical of all who recommend or use this ultra-modern equipment.

Sellers Kitchen Furniture Units have introduced an era of kitchen efficiency, of sound practical construction, of beauty, quality and character, hitherto unvisioned either by architect or layman. They are available in many modern color effects. Over fifty unit designs afford countless combinations meeting practically every space requirement. Like other fine furniture the units come ready for installation. Set them in place—tighten a few bolts—the job is done.

This modern kitchen equipment brings to architect or builder the co-operation of America's foremost designers and makers of kitchen furniture. It does away entirely with extra millwork, carpentry, finishing. Hence it means a marked economy with a quality of results otherwise impossible.

Free Architectural Service

Send in your plan and our experts will submit complete plan and estimate.

G. I. Sellers & Sons Co.

Dept. 130

ELWOOD, INDIANA

SELLERS

KITCHEN FURNITURE UNITS

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE

We have
us give
coupon

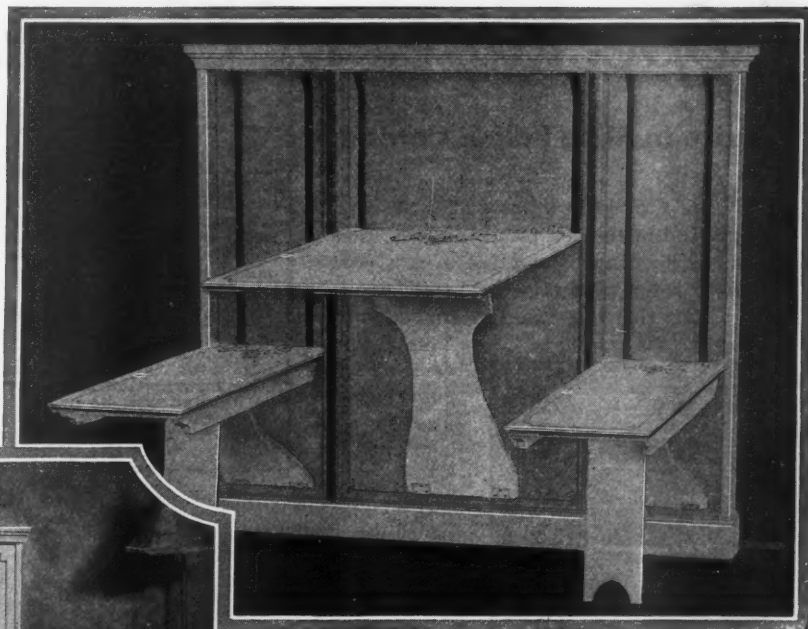
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direct to

SPECIALTIES for Quick Sales and PROFITS

WALNOOK Utility Furniture

(PATENTS PENDING)

**NEW
MODERN
LOW-PRICE**



The "Walnook" is the latest development in space-saving, home conveniences. This new, compact folding nook is unsurpassed for beauty, convenience and utility. Makes an ideal Breakfast Room in the home and is a wonderful space-saver in the small apartment.

The table and seats accommodate four people. The "Walnook" folds into a compact unit less than four inches in thickness and may be installed *in the wall* or in modernizing old homes and apartments *attached to the wall*. A variety of models and finishes makes it easy for you to select a style that will best suit your needs.

The Astonishing Low Price

makes it worth every builder's time to investigate the "Walnook." Just fill out the coupon below for complete, Free Information, or see it at your dealer's.

WILHELM FURNITURE COMPANY
STURGIS Walnook Division MICHIGAN

DEALERS

We have a very attractive proposition for live dealers. Let us give you complete information on our profitable line. The coupon on the right is for your convenience.

Salesmen Wanted

Some unassigned territory still open for good salesman selling direct to Building Material trade.

THE WILHELM FURNITURE CO.
Walnook Division, Sturgis, Michigan

☐ Please send me complete information about the "Walnook."
☐ Dealer's proposition.

Name.....

Address.....

Town.....State.....

Occupation.....

WHAT'S NEW

for BED-ROOM and BATH

Specialties of Greater Sales Value

Built-in Shoe Polish Cabinet

WHEN shoe brushes and shoe polish are wanted in a hurry they are usually found in the last place you look, then there is no convenient place to rest your foot while applying them, and this in spite of the fact that they are used almost daily.

This inconvenience is entirely unnecessary. Install a cabinet like the one in the picture and shoe polishing equipment will always be at hand and there will always be a handy place for polishing shoes. Install this equipment in the house that is built to sell and it will prove to be another of those items so helpful in closing the sale.

This cabinet is made of heavy gauge furniture steel, finished in baked white enamel with nickel plated hinges and solid shelves. It is easily kept clean and will not crack, chip or warp. It is recessed into the wall at just the right for use. When open the door provides a suitable foot rest and reveals shelves conveniently arranged to hold the polishes, brushes, etc. The flanges overlap the wall tile so that they cover rough, unfinished tile edges.

A Handy Cabinet for Shoe Polishing Supplies and a Foot Rest.

For old houses, where it is wished to avoid expensive rebuilding, there is a wall model, not recessed, which can be attached to the finished wall. It takes up very little room and provides exactly the same convenience as the recessed model.



Integral Steel Shower Stalls

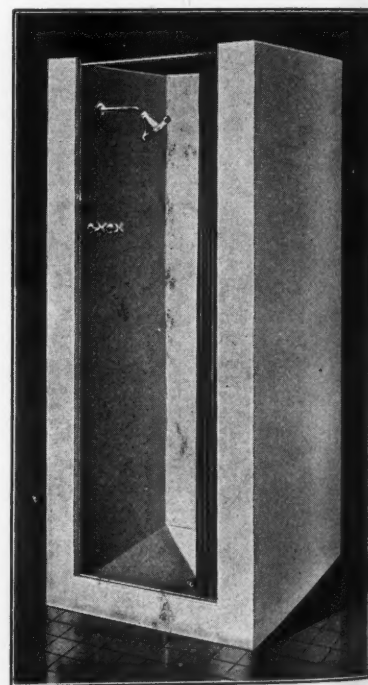
SHOWER stalls which are fabricated from $\frac{3}{8}$ inch copper bearing steel, as integral units, afford leak-proof and economical shower equipment, adapted to all types of buildings, both old and new. They can be placed wherever supply and waste pipes are available, in single units or in batteries. The high cost of labor and materials are eliminated in the use of these stalls. Highly skilled labor is not

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required, for setting is unnecessary and there are no construction extras such as lead pans, special waterproofing, etc.

The integral shower stall precludes leakage which results from cracking, shrinking or settling of structural members. The walls and bottom are so constructed that the stall may be set on any kind of floor, no special support being required. The only skilled labor required is that of a plumber for making the pipe connections. And standard shower equipment such as valves, head and supply pipes can be used.

Each stall has sides six feet high, made of one continuous sheet, fitted with upset bottom sloping to the drain welded to the sides and equipped with a standard brass outlet, including sole leather gasket, lock nut and nickel plated strainer for a two inch waste pipe. The stalls are finished with one coat of special oxide, waterproof primer baked on at 350 degrees Fahrenheit, and one additional coat acid-proof paint on the bottom and sides to be placed against masonry walls. After installation is complete the interior and exposed exterior should be finished in waterproof enamel paint.



A Steel Shower Stall Which Is Proof Against Leakage Because Made Integral.



What Modern Ventilation Means

ALTHOUGH 80 per cent of the Chicago Apparel Mart will be ventilated direct, the plans for this new skyscraper call for 16 miles of ventilating ducts to carry fresh air to the halls, basements and interior areas, according to Walter W. Ahlschlager, architect. Fifty fans will make it possible to change the air in the artificially ventilated areas every ten minutes. The air will be filtered and warmed during the winter and washed in summer. Approximately 2,000 square feet have been provided for fresh air intakes, and the air ducts will contain more than 350 tons of metal.

The Bath of the Future The Combination Bath Tub

Regular Bath, Shower Bath, Seat Bath, Foot Bath, Child's Bath. All in one piece, Patented

Semi-Vitreous Porcelain and Enameled Iron Ware

Its Advantages: A Seat, Foot, Shower and Child's Bath, all in one.
Comfortable because the bather assumes a sitting position.

Easy operation of valves.

No grip rails needed.

Saves space. Size of Bath Tub, 44x30 inches. For tiling in recess or corner of room.

Write Us for Descriptive Booklet Giving Measurements and Other Details and Testimonials

TELEPHONE MOHAWK 3102

KITCHENETTE APARTMENTS



May 28, 1928

Wheeling Sanitary Mfg. Co.,
Wheeling, West Virginia.

Dear Sirs:

Referring to your request that, if I could consistently do so, I give you a testimonial having special reference to the 84 Combination Baths, and incidentally the other bathroom fixtures, including vitreous china lavatories and water closet bowls of your manufacture, installed in the Lincoln Park Arms Hotel nearly a year ago, and of which I am the Manager.

On the whole, we are delighted with our bathroom equipment, especially the Combination Baths. They have proven a favorable factor to the management in the conduct of the Hotel. This is evidenced and supported by their general approval on the part of our guests.

Therefore, I can recommend the Combination Baths without stint or reservation of any kind. Furthermore, I shall be glad to have you send any persons here who may be interested and wish to inspect the baths.

I trust this meets with your approval.

Yours very truly,

Wm. J. Joffe
Wm. J. Joffe
Mn.



PLATE 11-E
Enameled Iron Ware, 44x30 inches to tile in right or left hand corner. Enameled white all exposed parts. Same as Plate 10-E except for corner installation.



PLATE 10-E
Enameled Iron Ware, 44x30 inches to tile in recess, only. Enameled white front. Waste in foot section either right or left hand end.

100%

**Wheeling Sanitary Mfg. Co.'s
Installations**



Plate 126-E "The Tranquil" all white Syphon Jet Water Closet Combination.

We manufacture a complete line of Plumbing Fixtures of Vitreous China, Enameled Iron, Semi-Vitreous Porcelain, comprising Water Closet Bowls and Flush Tanks, Lavatories, Regular Bath Tubs, Kitchen Sinks, Laundry Trays, Urinal Stalls, etc.

**WHEELING SANITARY MFG. CO.
WHEELING, W. VA.**

Manufacturers of High Grade Plumbing Fixtures
Sold by Leading Jobbers of Plumbing Supplies



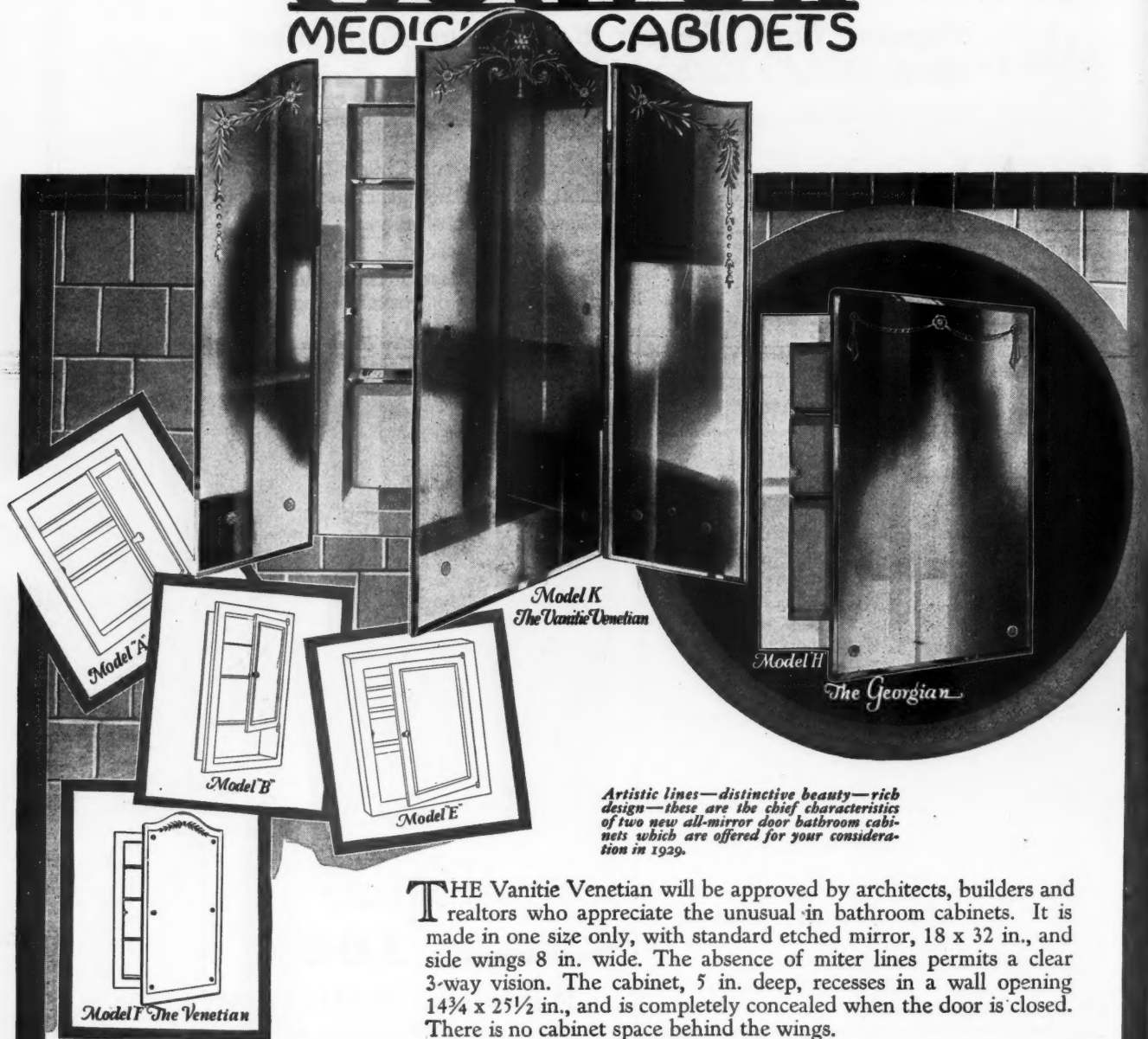
Plate 100-E Lavatory on Pedestal. Two sizes—24x20 inches and 26x22 inches.

SPECIALTIES for Quick Sales and PROFITS

For Distinctive Bathrooms use

MORTON

MEDICAL CABINETS



Artistic lines—distinctive beauty—rich design—these are the chief characteristics of two new all-mirror door bathroom cabinets which are offered for your consideration in 1929.

THE Vanitie Venetian will be approved by architects, builders and realtors who appreciate the unusual in bathroom cabinets. It is made in one size only, with standard etched mirror, 18 x 32 in., and side wings 8 in. wide. The absence of miter lines permits a clear 3-way vision. The cabinet, 5 in. deep, recesses in a wall opening $14\frac{3}{4} \times 25\frac{1}{2}$ in., and is completely concealed when the door is closed. There is no cabinet space behind the wings.

The Georgian was designed to meet the demand for an attractive cabinet between Models A and B and the Venetian type. It is made in one size only, a 16 x 20 in. beveled, etched mirror, having slightly rounded corners, decorative rosettes and clear vision. It requires a wall opening $12\frac{3}{4} \times 16\frac{3}{4}$ in.—recessing a full 5 in. if desired.

A Complete Line

11 models in the MORTON Line of Bathroom Cabinets, to recess or hang on the wall. Built of steel, electrically welded; finished in a beautiful white enamel, permanently baked on. Many distinctive features of construction. Installed instantly—"Out of the carton into the wall."

Nationally advertised in the Saturday Evening Post, Literary Digest, Good Housekeeping, American Magazine and House and Garden.

MORTON MANUFACTURING COMPANY

5190 WEST LAKE STREET-CHICAGO, ILL. U.S.A.

MORTON MANUFACTURING CO., 5190 West Lake St., Chicago, Ill.



Without obligation, please send me a catalog of the MORTON Line of Steel Bathroom Cabinets.

Name _____

Address _____

City _____

State _____

Please check business or profession:

Architect _____ Builder _____ Contractor _____ Realtor _____ Home Builder _____



"and it had a 'Standard' Dishwasher in the kitchen. That settled it!"

"Yes, we looked at ever so many beautiful homes. But you know me, Marge. I look at the kitchen first. Most women do, nowadays... Oh, most of them were terrible! But this home is a dear! I loved it the minute I saw it. And it had a 'Standard' Dishwasher in the kitchen. That settled it!"

You can't find fault with her judgment, can you? And she's typical of her class—the women who look at the kitchen first. They may admire the iceless refrigerator—they may approve the gas range—but a 'Standard' Electric Dishwasher and 'Three 8's' Sink will clinch the deal and close the sale.

You'll be surprised, too, at the relatively small cost of this Dishwasher,

compared with other elements in the house. Yet no other one thing exerts more favorable influence on the decision to buy. Nothing else you can provide so assuredly creates an environment of such distinction and character.

The 'Standard' Electric Dishwasher embodies certain exclusive features which immediately identify it to the discerning housewife. Its washing principle—a forceful jet of water, propelled by a centrifugal pump; a slowly-revolving basket exposing every portion of the dishes;

clean hot rinse water direct from supply pipe. Its ease of cleaning—compartment free of mechanism; only one small screen to clean. Its accessory tools—the pot brush, the cream whip, operated electrically by flexible shaft from motor.

Equally important is its 'Three 8's' Sink design, with its 8-inch back that fits under low windows; its 8-inch deep compartment; its 8-inch massive front, or 'apron'. Added influential features are Acid-Resisting Enamel—a stranger to fruit acid spots and stains; Chromard Finish Fittings, tarnish-free; swinging spout faucet. Garbage container at slight extra cost.

Standard Sanitary Mfg. Co.
PITTSBURGH

"Standard"
PLUMBING FIXTURES

Examine this Dishwasher and Sink at a 'Standard' Showroom. Then, you won't question its appeal!

Builders Recommend Colonials

The classic design of this Colonial doorway has interested many architects and builders. It is found in the Field House, built of Pine at Longmeadow, Massachusetts, about 1795.



WHEN our Colonial ancestors built their homes of pine, they started a style of American dwelling which has grown in favor with the years. The oldest homes in this country today are Colonials built of Pine. There is an increasing interest among architects and contractors in this type of dwelling which gives the most years of real home comfort for each dollar expended.

In planning to use Shevlin Pine for your Colonials you

can be sure of lumber which is smoothly milled, carefully seasoned and rigidly graded. Light in weight and easy to handle, Shevlin Pine fashions readily under tools and saves labor time.

Leading lumber dealers can supply Shevlin Pine in five varieties: Shevlin Northern White Pine, Shevlin Pondosa Pine, Shevlin Norway Pine, Shevlin California White Pine and Shevlin California Sugar Pine. Write for booklet, "Specify Shevlin Pine."



Shevlin, Carpenter & Clarke Company
903 First National-Soo Line Building, Minneapolis, Minn.

Chicago Sales Office: 1866 Continental & Commercial Bank Bldg.; San Francisco Sales Office: 1028 Monadnock Bldg.; Toronto, Ontario, Sales Office: 606 Royal Bank Bldg.; Sold in New York by N. H. Morgan, 1205 Graybar Bldg., 420 Lexington Ave.

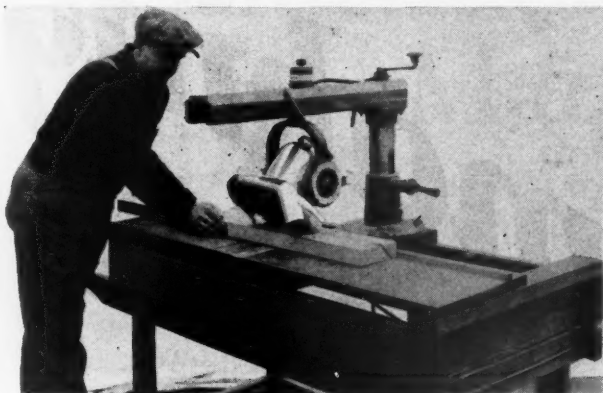
WHAT'S NEW in CONTRACTORS' EQUIPMENT

New All-Purpose Woodworker

THE manufacturers of a well known woodworker have announced, as an addition to their line, a new, junior model, all-purpose woodworker. This machine incorporates the exclusive features associated with the older model with balanced, guided power applied to the saw in all cutting positions, instant change from cross-cutting to ripping without stopping the motor, provided with accurate ripping gauge and dials for adjustment to any position. The universal motor equipment operates from any cycle in either alternating or direct current by plugging into the nearest light socket and develops ample power and efficiency.

The machine handles accurately, safely and profitably 29 distinct cutting operations, including dadoing, routing, mitering, shaping, grooving, ploughing, rabbeting, mortising, tenoning, gaining, etc. The mere attachment of the necessary tool, which takes only a moment, adapts the machine to another job. All the work is handled rapidly from one side of the table and layout marks are always in plain view.

With the 12 inch saws, which are standard equipment, it rips two inch stock at the rate of 20 lineal feet per minute and it will route one rise and tread stringer in 12 minutes.



This New Woodworking Machine, Made by a Leading Manufacturer, Performs 29 Distinct Operations.

Fitted on a wooden table 29 by 59 inches, it weighs 235 pounds. It is compact and readily portable and can be carried, easily, by two men to be set up on a pair of horses or moved on a movable truck. It has a roller bearing arm, making for easy operation. Standard equipment includes an adjustable guard that fits down to the work and gives positive protection to the operator.



A Machine for All Excavating

AN entirely new excavator has been announced which, it is said, will interest every type of contractor, whether his work is general excavating, road grading, road cutting, road filling, stripping, airport, athletic field, golf course or race track construction. It has been actively in use in

the test field for a number of years and will be placed on the market in the near future.

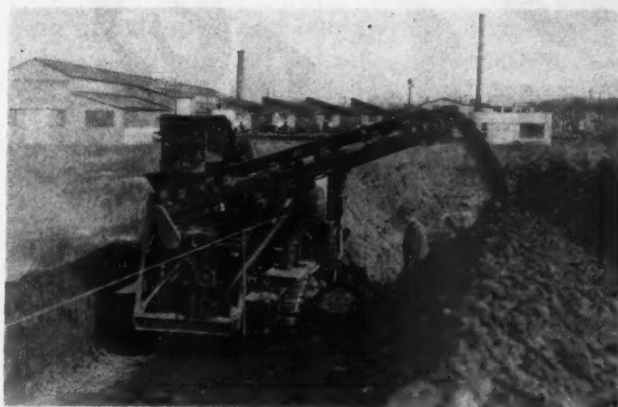
This machine consists of a sturdy chassis, mounted on crawlers, with four vertical booms (similar to those used on this company's ditcher) going ahead of the chassis. The manufacturers claim that it is the only machine which, in excavating material, prepares it for other uses. The new machine has a constant milling action sending the material on the end of the discharge conveyor in the form of ground up material, suitable for all kinds of filling, while the shovel, elevating grader, drag line and large ditcher all discharge the material in large chunks or lumps.

The principal features of the machine are that it is built to stand the strain of the toughest sort of digging and that it is designed with the primary thought of having it do the most accurate grading. It will cut one inch off the surface or seven feet. It makes a cut eight feet five inches wide. The booms are in two units of two bucket lines. Each unit is

controlled independently of the other.

The capacity is conservatively estimated at from one to three yards a minute. Its efficiency is not limited by the alertness or mental or physical endurance of the operator. The operator does not have to watch the bucket every instant. If the machine is discharging into wagons or trucks, his principal job is throwing out the clutch at the end of a load, letting it back at the start of the next, no raising, lowering or swinging of the boom and buckets to watch. He can spend all the time he wishes watching the grade.

Before the operator is a set of indicators showing the angle of the boom and the machine in both the horizontal and vertical planes. The dials also show the depth of the cut and the relation of the two boom units to each other. The operator easily controls the digging angle and depth as the whole boom mechanism is raised and lowered by power and the efficiency line maintains a steady horizontal course.



An Entirely New Type of Excavator, Which Is to Be Placed on the Market After Several Years of Actual Field Tests, Is Adapted to All Kinds of Excavation.

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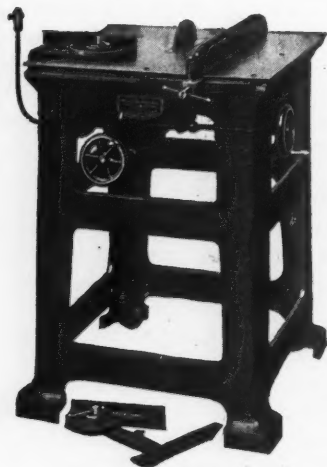
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Workace Radial Saw

Amazing Low Price,
\$140

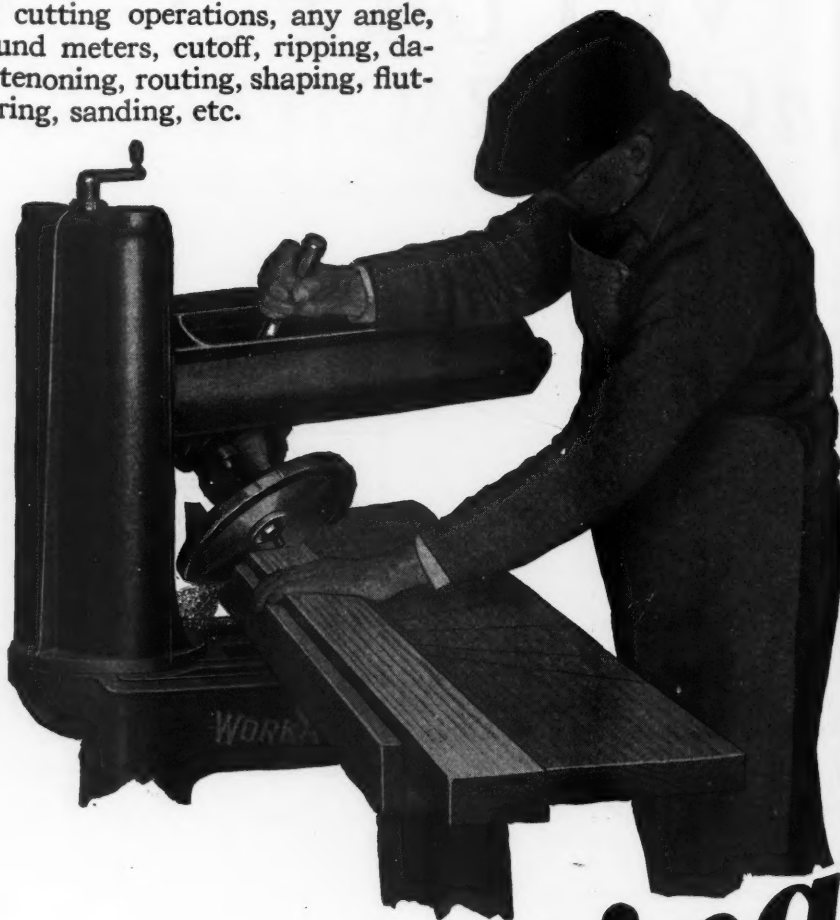
Cast Iron Table, \$10.00 Extra
Cast Iron Legs, \$15.00 Extra
(F. O. B. Chicago)

Here's a great big value in a compact, portable machine—the Radial Saw, built to handle all cutting operations, any angle, compound meters, cutoff, ripping, da-doing, tenoning, routing, shaping, fluting, boring, sanding, etc.



Wallace Portable
Universal Saw

A portable floor type of Universal Circular Saw that combines all the advantages of the portable bench machine and the self-contained floor type. The saw can be moved independent of its base.

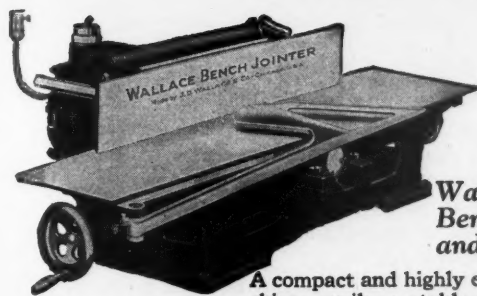


Wallace PORTABLE MACHINES Money-making

SAVINGS of time and man-power are not all you can expect from Wallace Machines. You'll get better work using them—and more work done speedily.

Wallace Machines operate direct from the motor—no belts. Wallace Machines are so light and move about so easily that it pays to take them to the job instead of taking the work to the machine. Wallace Machines are so compact that they require little room. You can attach them to any convenient electric socket.

You can do as many other contractors and

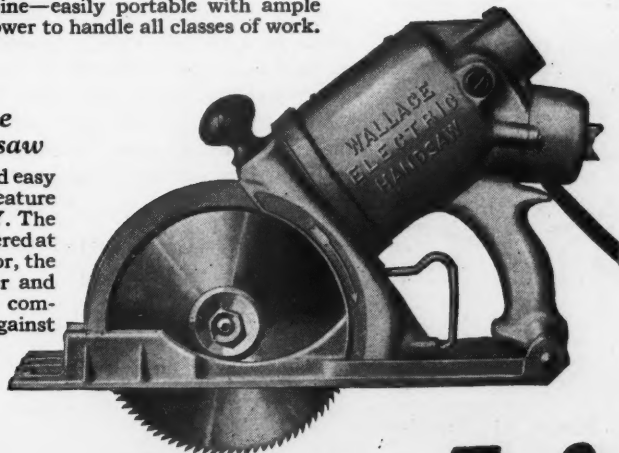


**Wallace
Bench Planer
and Jointer**

A compact and highly efficient machine—easily portable with ample power to handle all classes of work.

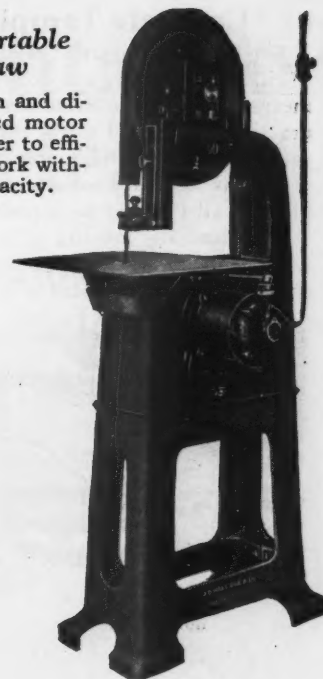
**The Wallace
Electric Handsaw**

is light in weight and easy to handle. Its chief feature is absolute SAFETY. The blade is entirely covered at all times. The motor, the switch, the operator and the saw itself are completely protected against injury.



**Wallace Portable
Band Saw**

Contains built-in and directly connected motor with ample power to efficiently handle work within its full capacity.



Woodworking

Individual Portable Machines

YOU'LL make a profit by applying Wallace Machines to your business. This is not an idle claim but one that we can prove in your case just as we have proved it thousands of times. The time-saving feature of Wallace Machines alone pays for this splendid equipment.

carpenters do—move your Wallace equipment into a workshop, garage or basement during slack times and turn out storm sash, screens, mouldings, cabinets and other standard woodwork. Profits you can make from this extra work alone will pay for your Wallace equipment.

Free Trial — Easy Terms

You'll find the Wallace way so much cheaper and more satisfactory than old-fashioned methods. Send for details of our proposition. We'll ship you one or more Wallace Machines

on approval. You can pay for them at your own convenience—a little each month . . . Or you can return them and the trial won't cost you a penny—not even freight charges.

Write today for illustrated catalog—free.

J. D. WALLACE & CO.,
136 S. California Ave., Chicago, Ill.

You may send me your book on Wallace Portable Machines and full details of *Free Trial Offer* and easy terms.

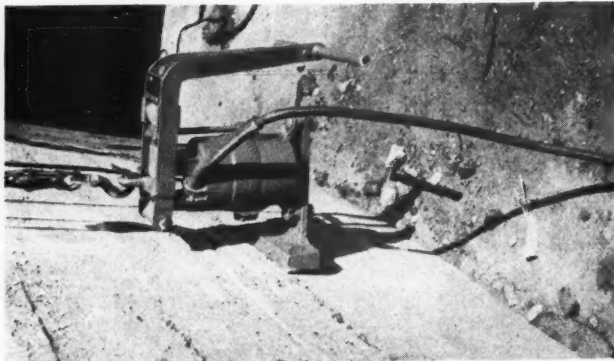
Name.....

Address.....

Concrete Tamping By Vibration

VIBRATION, state the manufacturers of the machine illustrated here, has long been recognized as an ideal means of placing concrete but, until recently, has never been practical because of a lack of a satisfactory means of application. This new, high frequency vibrator, for use on concrete has now been perfected and is said to be accomplishing all that has been desired in this field.

The machine consists of an electric motor revolving at 3,600 R.P.M., with an unbalancing weight welded to the shaft. Where it is possible to work directly on the surface



This Machine Provides a Practical Means of Tamping Concrete by Means of Vibration to Secure Density.

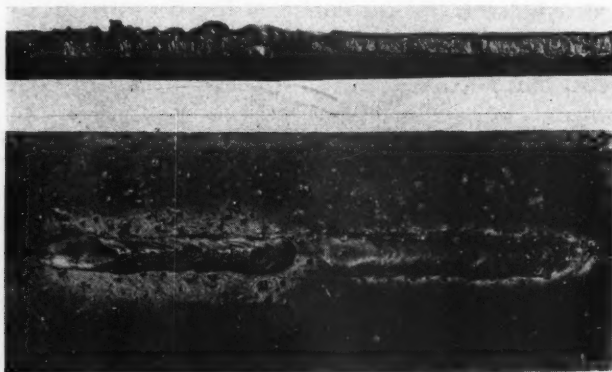
of the concrete, such as mass work, floors or slabs, the motor is attached to a foot block of suitable size and shape, and is operated by merely placing the apparatus on top of the concrete as it is placed in the form. For columns, walks, tunnel linings and any thin sections, the motor is fitted with various foot blocks and fastened directly to the outside of the form.

The high frequency vibration causes a consolidation of the mass beyond that which is possible by any hand method of placing. All air and excess water are driven off, thus increasing the strength and density and eliminating the danger of honeycombing which is always present when handling dry mixes by hand methods. The range of workability is extended by this machine beyond the usual conception thus making possible the placement of dry mixes by making them plastic and workable.



Electrode for Faster Welding

ANNOUNCEMENT has recently been made of the perfection of a new welding electrode which permits greatly increased welding speed and which will soon be commercially manufactured and placed on the market. The manufacturers state that, in general, the speed of welding has been doubled or trebled with this electrode. This



The Upper View Shows the Depth of Weld, the Lower View the Smooth Appearance of the Weld Made with This New High Speed Electrode.

speed will be reflected in lower welding costs wherever the new electrode is used.

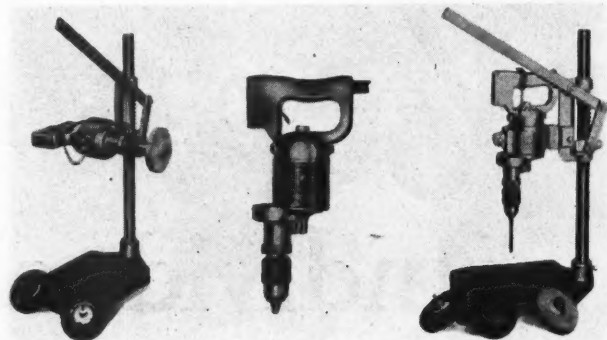
The use of high speed electrodes has, in the past, been retarded due to the porosity obtained with the necessary higher currents. This difficulty has been overcome, it is stated, by the highly specialized processes of manufacture used. An incidental advantage of the new electrode is the smooth finish of its head. This is caused, in part, by the higher speed of travel and is, in part, inherent in the composition of the rod.

The absence of a crater in the new electrode bead, as seen in the illustrations, is indication of its smooth flow when in a molten state. Greater ductility of the head as well as deeper penetration are two of the requisites of better welding which the newly developed high speed wire offers, it is said. The electrode itself is an extruded wire that permits high speed welding without loss of denseness and ductility to the weld metal.



Portable General Purpose Drill

HERE is a new, $\frac{3}{8}$ inch, portable, electric drill, of exceptionally light weight, yet well powered, and particularly adapted to general repair work. The manufacturers state that experience has shown that 90 per cent of the holes drilled in such work are $\frac{3}{8}$ inch or less. Also that, in many cases, there is need for a tool to do odd grinding



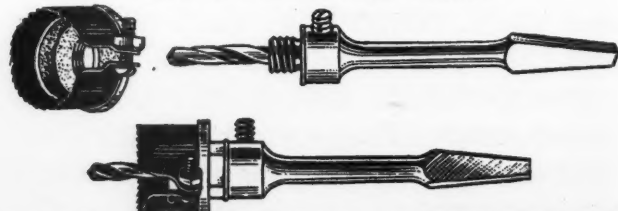
It Is Said That 90 Per Cent of the Holes Drilled in General Repair Work Can Be Handled by This New $\frac{3}{8}$ Inch Drill.

and buffing jobs. This drill is designed to meet these requirements.

Its unusually light weight, only $7\frac{1}{2}$ pounds, appeals to the mechanic. It is powered by a universal motor of one of the best makes, of the variable speed type, controlled by an oversize trigger switch. With this drill can be furnished a stand for holding it vertically for drilling and horizontally for grinding and buffing.



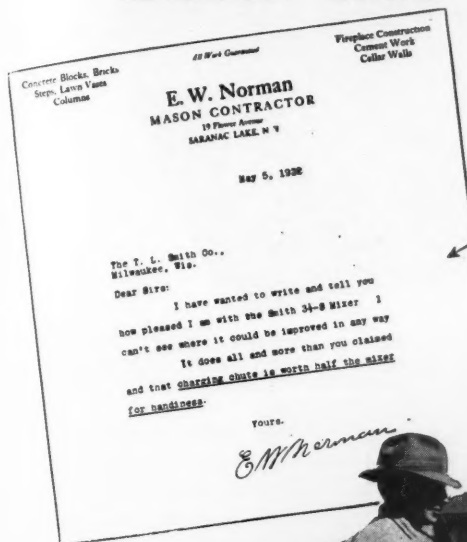
Saw Cuts Round Holes



Used with Either a Hand Brace or an Electric Drill, This Saw Cuts Perfect, Round Holes in Wood, Iron or Steel.

THE circle saw shown here can be used for cutting round holes up to four inches in diameter and will cut perfect holes in wood, iron, or steel. The sizes run from $\frac{3}{4}$ inch to four inches by variations small enough to give a complete range for all work, and are adjustable to size. This saw can be used with either a hand brace or with an electric drill.

Mr. Norman---Mason Contractor Hits the Nail on the Head



**"That Charging Chute
is Worth Half the
Mixer for Handiness"**



THE Smith 2 1/2-S and 3 1/2-S Mixers each have a charging chute that makes loading both faster and easier. Waist high, with a wide opening, it saves many minutes a day and the men are still working fast at quitting time.

Another time-saving, profit-making feature is the "end to center" mixing action that gives you better mixes in less time. Exactly the same

as the big mixers used on the world's greatest construction projects.

Discharge is faster, too. The Smith Double Cone Tilting Drum has been unequaled for fast discharge for 29 years. Just a tilt of a lever and dry or wet batches come shooting out. Get a Smith for Speed—get a Smith for Dependability—get the Smith Catalog NOW!

The T. L. SMITH COMPANY 1026 32nd St., Milwaukee, Wis.
Division of the National Equipment Corporation

**Write for the
Large Free Smith
Catalog**



Date _____
Name of your Mixer Catalog No. 578
Interested in a _____ mixer.
(Size of mixer)
State _____

SMITH MIXERS

1028

Electric Warning Signal

THE announcement of an automatic, electric, warning signal, with far greater visibility than the ordinary oil lantern and more cheaply operated, is of interest to contractors, road builders and all concerns engaged in outside construction work. Research experts of the company making this signal state that the average oil lantern costs \$45 or more a year, for filling, cleaning, replacement of chimneys and depreciation and that the first cost of the new



electric flasher is considerably more than the first cost of an oil lantern, but that its maintenance is so much less, over a reasonable period of time, that it is much more economical to use. Additional savings are realized from the fact that the greater warning power of the flasher enables one flasher to replace several oil lanterns and at the same time give greater protection.

This signal is readily portable. The entire unit, fully equipped with batteries,



This Automatic Electric Warning Signal, Though Higher in First Cost, Is Said to Be More Economical Than an Oil Lantern and Is Far More Efficient.

weighs 16 pounds. It is 16 inches high and seven inches in diameter at the base. The batteries used are a standard six-inch size universally obtainable for replacements. The intermittent flashes uses the battery capacity to the best advantage, making the batteries last longer than they would under a steady load. It is estimated that this unit, operating steadily, will cost only \$10 a year to keep charged.

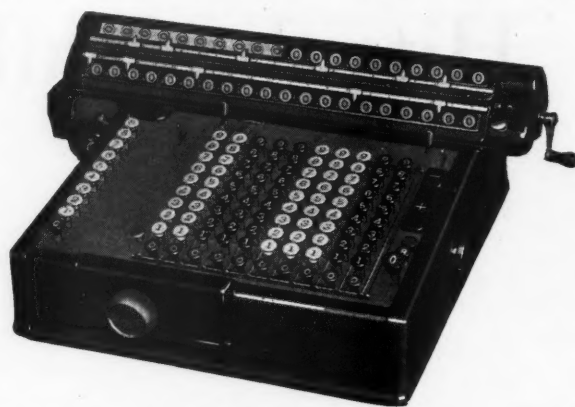
Once in operation the unit requires no attention at all except to replace batteries every two or three months. The battery compartment is constructed of seamless steel, attractively finished in red and the top is cadmium plated for weather protection. The heavy red glass lens throws a powerful warning beam. The padlock for the battery compartment has an extra long hasp so that the unit may be chained and protected from theft. The rugged construction throughout makes the whole unit completely weatherproof.



Machine for All Calculating

THIS machine is an adding-calculating machine of the crank drive type with standard keyboard. It is capable of performing, directly, all four functions of arithmetic, addition, subtraction, multiplication and division. As stated by the manufacturers, its advantages are: simplicity and ease of operation; positive and visible proof of the accuracy

of every step of a problem; speed resulting from many short-cutting processes; and adaptability to any type of figure work. It does not require a specially trained operator



All Kinds of Calculations, Including Costs, Payrolls, Interest Charges, Inventories, Depreciation and Building Estimating Can Be Handled by This Machine.

for its principles of operation are quickly mastered and anyone can begin, immediately, to turn useful answers.

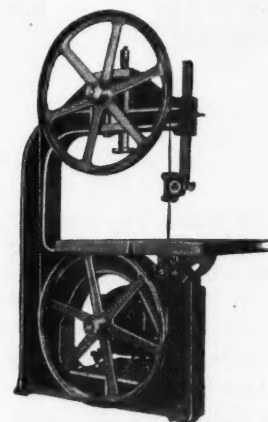
The universal serviceability of this machine is evidenced by its use in every line of business, it is stated. It handles both ordinary figuring and highly specialized calculations, such as the solution of square root and involved engineering formulae. It figures payrolls, invoices, discounts, costs, inventories, percentages, interest charges, ratios of depreciation or turnover. Its high degree of accuracy recommends it to contractors who find it especially useful in estimating.



Portable Motor Band Saw

THE modern, box type construction is used in this portable, motor driven, band saw. The base has a three point bearing which assures a solid setting on any type of bench or uneven surface. The frame is made in one piece, thoroughly ribbed and braced and the whole machine is very rigid and strong. The cast iron table, which measures 14 by 16 inches, can be tilted to 45 degrees.

The wheels are of cast iron, turned true and balanced for high speed. The upper wheel is ball bearing mounted and the lower wheel is mounted on the motor shaft. There are no belts. The wheels are 16 inches in diameter with a one-inch face. There is a thumb screw adjustment on the upper wheel for alignment and "tracking" of saw blades which is instantaneous in operation. A spring tension, for the saw blade, has a hand wheel adjustment.



Here Is a New Portable Band Saw of the Most Modern Type.

The upper guide is of a ball bearing, non-friction type of the latest design. The lower guide has hardened steel thrust adjustable to different widths and thicknesses of blades. Either a $\frac{1}{2}$ horsepower or $\frac{1}{3}$ horsepower motor, for any current, is supplied and is mounted on the lower wheel. The machine is furnished complete with motor, switch, cord, plug, guides, and two saw blades. Saw guards and floor stand can be furnished, on order, at extra cost. The over-all height of the machine is 41 inches.

A New Mixer at New Prices

Many months ago Rex engineers were instructed to build for 1929 a 1-bag mixer that would outstandingly surpass even

the remarkable performance of its preceding Model.

The result is advertised on this page:

... a brand new mixer ... patterned basically on the very successful Rex 10-S ... lighter, stronger, handier, more perfectly engineered ... and a greater performer than ever.

In addition, Rex production facilities bring this greater 1-bag mixer to contractors at prices that give your mixer buying dollars a surprisingly new standard of value.

SAY

hello
TO

1

Convenient end controls

2

Spring hung axles, easy riding

3

Money making performance

4

Pressed steel heads and drum rollers on Timkens

5

Enclosed gears in oil

6

Fast, easy charging skip

7

Modern, skeleton top frame

8

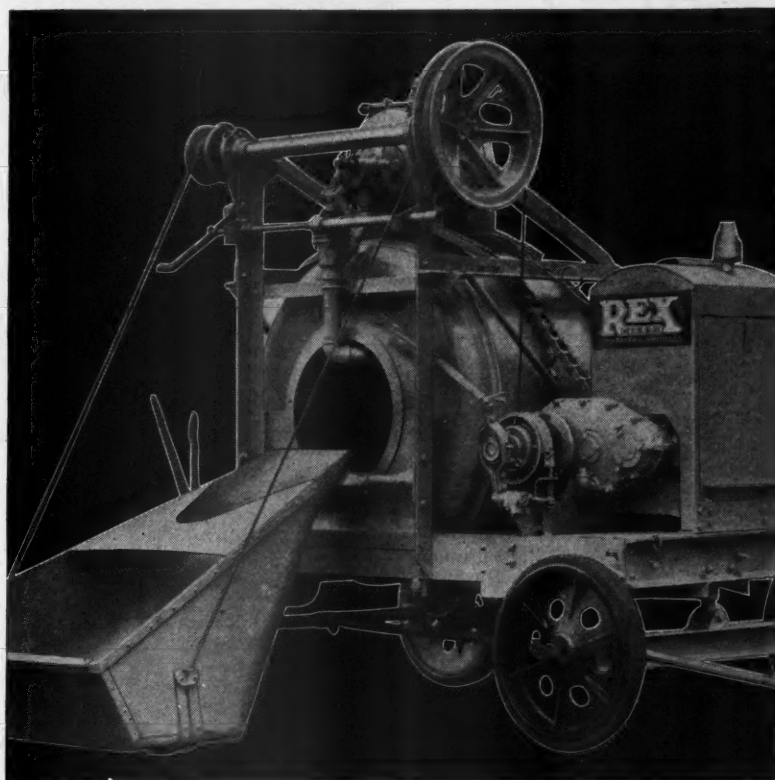
No countershaft

9

Fastest charge and discharge

10

Fast accurate water



SAY

goodbye
TO . . .

1

Old-fashioned countershaft

2

Exposed grinding gears

3

1,000 pounds excess weight

4

Top heavy frame

5

Slow inaccurate water

6

Slow charge and discharge

7

Low-speed rough-riding, towing

8

Inconvenient misplaced controls

9

Slow charging skip

10

Old-fashioned performance

Before you buy a 1-bag mixer—before you send your present machine through another arduous season—get the catalog details on the latest and greatest 7-S that Rex engineering has developed.

CHAIN BELT COMPANY
721 Park Street Milwaukee, Wisconsin

COUPON

CHAIN BELT COMPANY,
721 Park Street, Milwaukee, Wis.

Send me Catalogs on the mixers I've checked.

1/2-bag tilter ☐ 1-to 2-bag 10-S ☐ 12-bag 56-S ☐
1/2-to 1-bag 5-S ☐ 2-to 3-bag 14-S ☐ 27-E Paver ☐
1-bag 7-S ☐ 6-bag 28-S ☐

Name _____

Address _____

City _____

State _____

REX
(Reg. U. S. Pat. Off.)

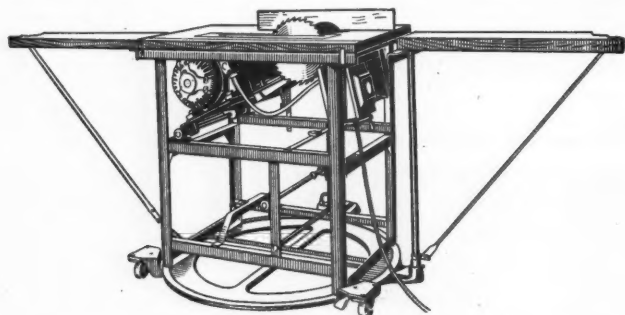
MIXERS

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

A More Powerful Portable Saw

A FIRM long engaged in the building material business has recently invented and patented a portable electric saw which is something entirely new and decidedly different from anything heretofore placed on the market, it is claimed by the manufacturer. These saws are especially adapted to the work of contractors and for lumber yards. They are designed to do a large range of work, and can also be operated in a very small space.

This combination saw is built with a steel frame and cast iron top, which makes a very rigid machine. They will rip green, wet fir two by fours, 14 feet in length at an average of 23 seconds. Ripping gauge tilts any angle to 45 degrees and has a range for ripping to the center



Decidedly Different from Anything Previously on the Market Is the Way the Manufacturers Describe This New Portable Saw.

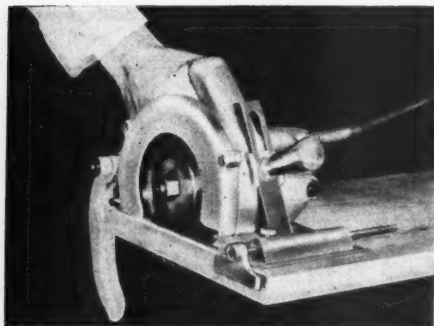
of 24-inch material. A 10-inch saw extends $2\frac{3}{4}$ inches above the table and can be raised or lowered to any desired depth; a 12-inch saw can also be used. Some of the jobs it does effectively are ripping, cut-off, and swing cut-off. Attachments for dadoing, plowing, grooving, matching, moulding, disc-sanding and grinding can also be secured.

The entire saw swings on a circular turn-table base, enabling the operator to cut off material at any angle, using wing-tables for end support. Wings are also used as receiving tables while ripping. The power unit can be locked, allowing the operator to rip while in swing cut-off position. The entire machine can be assembled and dismantled without the use of any tools.



Light Powerful Electric Saw

THE outstanding characteristic of this new portable saw is that it is mounted direct on a special motor armature which runs in two precision ball bearings packed in grease. This allows the full power of the motor to be applied direct to the saw blades and eliminates all trouble and friction caused by the use of gears, couplings, etc. Weighing only $10\frac{3}{8}$ pounds, it is an unusually

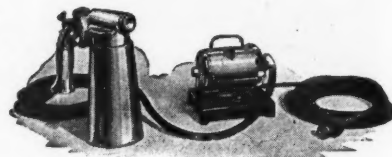


The Full Power of the Motor Is Applied Direct to the Saw Blade in This New Electric Hand Saw.

light saw and can be operated easily with one hand, as the weight is well centered. The six-inch blade will cut to a depth of $1\frac{3}{8}$ inches. There is a depth adjustment for cutting out flooring, dados, slots, etc.

Inexpensive Paint Spray Gun

HERE is a low priced but efficient paint spray gun which has been improved and made easier of operation. The complete outfit weighs $6\frac{1}{2}$ pounds, but the spray gun has been separated from the compressor so that the weight to be handled is only one pound. The compressor, which weighs five pounds and is attached to the gun by a $12\frac{1}{2}$ -foot air hose, can be placed on the floor or anywhere that the outfit is being used.



An Inexpensive Paint Spray Outfit Which Handles All Kinds of Materials Ordinarily Applied by Air Spray.

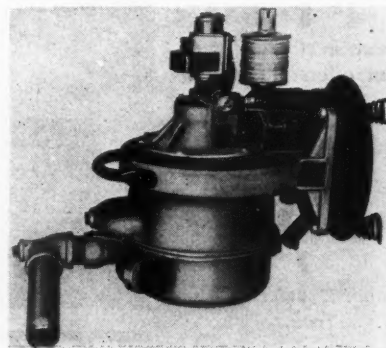
By means of a $12\frac{1}{2}$ -foot electric cord this outfit can be attached to any electric socket and, when the one quart container is filled with paint, is ready for immediate operation. The compressor is equipped with a universal type motor operating on either A. C. or D. C. current of 110 volts, or other voltages if desired. It develops a pressure of 25 to 30 pounds and assures an even pressure at all times.

The motor is screened, there are no complicated mechanical adjustments, it is easy to clean and all moving parts are enclosed. It will satisfactorily handle paint, lacquer, varnish, enamel, bronze, wall finishes, shellac, white wash, stencil ink, oils, powders, insecticides and disinfectants.



Portable, Self-Priming Pump

HERE is a new, portable, self-priming pump which embodies new features making it a two purpose pump suitable for pumping either volume or seepage. This pump is operated by built-in power, an air cooled gasoline engine. Spring feet on the base take up the vibration of the engine and eliminate skids or other foundations. The complete unit, engine, pump and fuel tank, weighs only 75 pounds. A conveniently located handle makes it easily portable by hand, by one man. There are only five moving parts. The self-priming feature has been achieved without the use of any vacuum apparatus or auxiliary mechanism of any kind. In spite of the small size and light weight of this unit, it is capable of pumping 6,000 gallons of water per hour, it is stated.



Unusually Light Weight, High Quality and Efficiency Will Be Found in This New Pump.

Since this pump is self-priming, no foot valve is required on the suction line. The pump is of approved design with a bronze open type impeller. The engine used is the same which this company has used for a number of years with complete success, for operating its pump and generators. The materials and construction are of the highest grade throughout. Oversize ball bearings are used on the main shaft and ignition current is supplied by a high tension water-proof magneto.

NOW YOU CAN BUY DIRECT FROM FACTORY

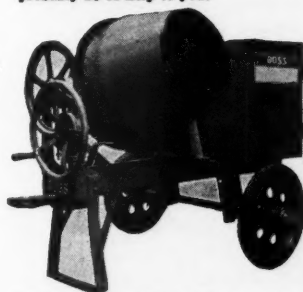
BOSS MIXERS and HOISTS

YOU GET SALESMAN'S & JOBBER'S PROFIT!

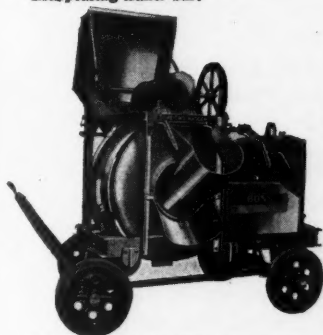
SAVE \$42 to over \$384 ON EACH MACHINE

A COMPLETE LINE

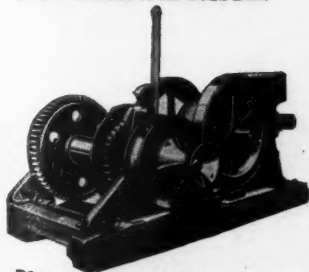
We make over 79 various sizes, combinations and types of BOSS Mixers, Hoists and Pavers. There is a type for every conceivable use. Get the new catalogue first, then decide. Often our customers find that they can use a much lower priced machine after studying this catalogue. There is no need of going elsewhere for a certain type machine when it is in the BOSS line. Write for catalogue and confidential wholesale prices; also give us information on the kind of work you want the machine for. We can probably be of help to you.



BOSS 3 1/2 S TILTER. Trailer type cushion rubber tires, shock springs, 2HP engine, friction brake discharge control, disappearing trailer bar.



BOSS 10S NON TILTER. "One-Two Bagger", patented remixing action, steel construction, high speed performance with one man control. The feature all purpose machine of the BOSS Line.



BOSS HANDY HOIST. single drum reversible. Cable shackle and niggerhead. Safety ratchet, powerful footbrake—ideal for material elevator work.

Every manufacturer is trying to reduce his selling costs. We have found the way and are going to give the difference to our customers in order to increase our sales. We have done away with all our salesmen and jobbers and are now selling direct to users. We have deducted the salesman's and jobber's commission from each machine and the difference is our price to you. This is the most astonishing news in the construction industry and it is certainly paying us as sales are jumping by leaps and bounds. Get the new catalogue with new confidential wholesale prices on each machine. It shows the most popular types and combinations, describing each fully—with new price. The coupon will bring it.

SAME HIGH QUALITY

Regardless of this drastic price cut, the quality of BOSS Mixers and Hoists remains the same. They have always been noted for their heavy duty construction and materials. Under no consideration will we ever sacrifice this reputation. Get the catalogue. Note the specifications and compare the prices. You get the same patented Re-Mixing Action and other exclusive features that have made BOSS preferred wherever used. Hundreds of BOSS machines have ten, twelve

and fifteen years of continuous service behind them and still going strong. For quality of design, materials and construction, we defy anyone to find a better built machine than a BOSS. You can now get all this for less.

GET OUR PRICES

Send Coupon for New Catalogue With Confidential Wholesale Prices

The new BOSS Catalogue gives complete information on all the BOSS Mixers, Pavers and Hoists along with the new confidential wholesale prices. Even if you do not want to order now, get this new catalogue and keep it on hand for future use. Fill in the coupon and mail today. It will save you money. Though you may have bought direct from a manufacturer before you have never been able to buy at these new prices because no salesman's or jobber's commission is figured in. Prices on every machine are greatly reduced. Get the new catalogue with wholesale prices.

NEW CATALOG WITH WHOLESALE PRICES TELLS ALL



1 YEAR GUARANTEE



5 DAYS' FREE TRIAL

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Everybody's Business

(Continued from page 40)

frequently halts long lines of cars in order to let one car—or what is more absurd, no car—pass.

This new device changes the signals when the motorist sounds his horn on approaching a microphone at the road intersection. This robot responds instantly to all types of horns on the side road, but will not change the lights for any horn that is sounded on the main highway. Even drivers of horse-drawn vehicles can get across by calling into the microphone. At the end of a predetermined number of seconds, the green light on the main highway is restored automatically. Such remarkable accomplishments indicate clearly the unmeasured possibilities that lie in the wider utilization of light and sound vibrations. Soon we will have a thousand automatons to obey the human voice.

There will be no end to the wonders of tomorrow. The daily applications of new technical knowledge to the practical affairs of life in the months ahead will perpetuate the present high rate of change in commerce and industry. These pages in succeeding issues will tell of the wonders of scores of remarkable new machines, materials and methods—things that will change human habits, alter viewpoints and revolutionize businesses.

The termination of the flow of the world's gold to the vaults of American banks brings to an end what will always be a memorable post-war period of credit inflation. We now return to the serious job of building our future on a foundation of science and invention, free of the artificial effects of further price inflation, and free of the stimulative action of huge accumulations of money which came by accident and which cannot soon be duplicated.



Builders—Dealers—Architects

(Continued from page 46)

on a slowly revolving circular board. On these panels were shown all the different types of plaster finishes with the different rooms and types of architecture for which they were appropriate. Still another booth, shown in one of the illustrations, contained the butt end of a redwood log, showing which parts of the tree are used for various purposes.

At the end of the "Redwood Trail" the visitor came to the planing mill where every machine was in operation with each employe dressed in new overalls, shirt and cap and with his name on a card over the machine. At one side of the mill a stage was erected and here the minstrel show performance was given.

During the course of the evening 5,000 people passed through the plant. As an added attraction, a cedar chest was raffled off. As the guests entered each was handed a slip of paper or folder which was an envelope stuffer fur-

nished by various manufacturers whose products the company handles. These had been stamped with a numbering machine and in the drawing, later in the evening, the lucky number was awarded the cedar chest. That this whole affair was a huge success from the standpoint of publicity and the building of good-will has been demonstrated in practical ways ever since the occasion.



Architectural Students Produce Models

(Continued from page 41)

The lot lay-outs are put on wall board. The grass is represented by fine sawdust stained green and sprinkled over glued areas. The trees are made of florist evergreen, bundled and tied together with black tape around the trunk. Florist moss shaped into bushes and shrubs, by hand, completes the planting display, that is so important in setting a house off to its best advantage. The sidewalks, drive and street are painted and marked to match the gray of cement.

Trimming and decorating the model is most interesting and is a very important step in the process. To get the desired effect, requires skill and patience, that only a few of the students possess.

The idea for the design of the Colonial house was secured from the front cover of the AMERICAN BUILDER several years ago. We liked the picture and made plans and model to match. This is but one of the many uses we have made of the magazine.

The English model was designed and built two years ago and a house was actually built from the plans, as the enclosed photographs show. The architectural classes all visited the finished house which was one of Toledo's "Better Homes" for 1926. It was finished and outfitted for public inspection.

The Spanish model made last year is to be built in the spring from the plans drawn by the students.

The models are the feature of our department each year, at the Industrial Arts Exhibit of the school. This type of work seems to appeal to the average person more than working drawings of a house plan.

Along with the model building we have taken up the designing of small homes on a competitive basis. From the winning design this year we expect to build our model. This gives the students another point of interest in the architectural classes and adds a real pleasure to their study.



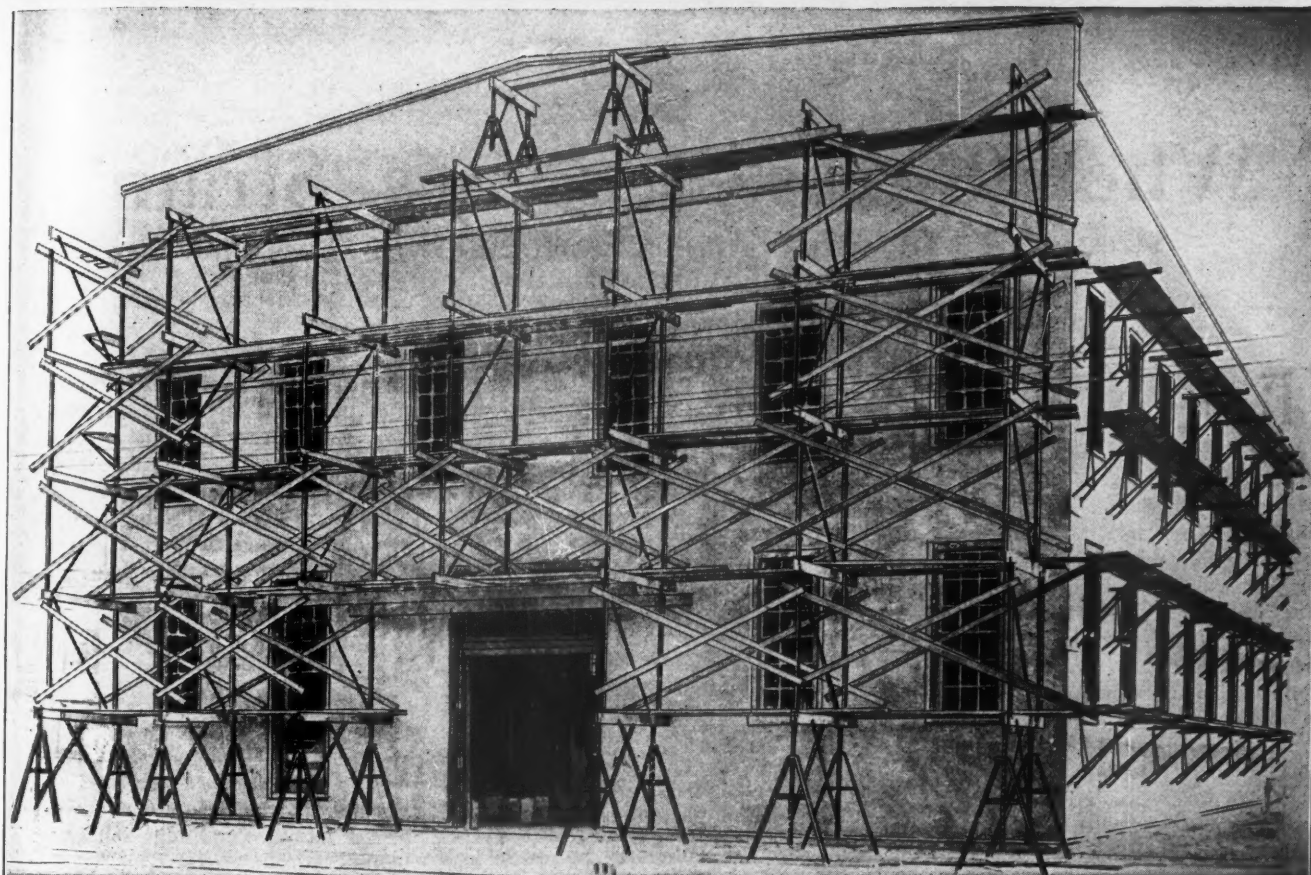
Goble Organization Celebrates Silver Anniversary

THE annual banquet of the staff and organization of Frank N. Goble, Inc., builders, of White Plains, N. Y., this year served to celebrate the twenty-fifth anniversary of the company which was founded in 1903. Nearly 400 men, including every member of the organization and a number of honorary guests, sat down to the dinner which was followed by speeches and entertainment. The entertainment included stereopticon views of typical scenes from Goble construction activities. A composite picture showing the various types of buildings the company has erected was also displayed. This group included almost every type of structure possible, homes, estates, clubs, churches, banks, hospitals, hotels, community houses, gymnasiums, power plants, warehouses, mills and offices.



Public Interest in the King Tut's Tomb Discoveries Was Used to Good Advantage with This Window Display Made from a Bit of Sand, a Miniature Pyramid, Some Palm Leaves and a Painted Drop.

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Why waste money buying wood for scaffolding that soon becomes scrap?

Why waste time building wooden horses?

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Why risk accidents? Why risk fire hazards?

TROUBLE SAVER Steel Scaffolding is practically everlasting—good as new after being used over and over again for 10 years or more. And returns its price in the labor it saves on every job.

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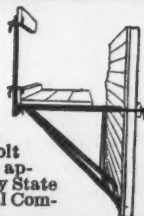
Evansville, Ind.



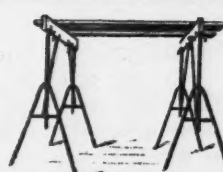
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Trouble Saver Adjustable Steel Trestles (patented).

Quickly adjusted to desired height. 8 sizes. Each also adjustable from 4 to 15 different heights, giving a range from 16 inch to 12 feet by 3 inch lifts.

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WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

MOTOR TRUCKS *and* TRAILERS

When 'Stress' Becomes 'Strain'

Stresses Are Anticipated in Truck Design But with Abuse They Become Strains Which Result in Failure

By FRED B. LAUTZENHISER

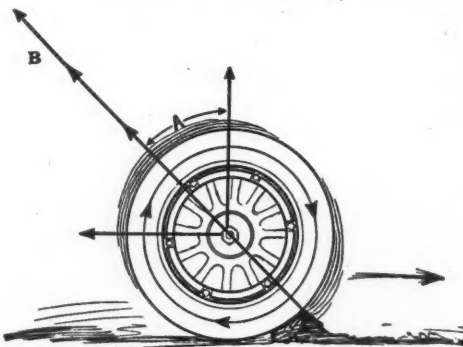
THERE is a fundamental difference in the meanings of the two words "stress" and "strain." A "stress" is a force applied, and a "strain" is the possible result. A definition for "strain" might therefore be "the result of a stress beyond the safety anticipated by the design." A member may be "stressed" and suffer no injury; however, if the "stress" is of sufficient intensity a "strain" will be the result. A member "strained" is on its way to certain failure.

Let us consider the "factor of safety" in determining the significance of these two terms. A shaft may be designed with a factor of safety of 15, meaning that the shaft will not be injured or "strained" until a "stress" of 15 times its normal carrying capacity has been inflicted upon it. The first infliction may reduce this factor of safety to 13, the next to 10, and next to 6, and so on until failure results.

For example, a shaft designed to carry one ton with a safety factor of 15, will actually carry a "static" or dead-weight load of 15 tons. However, an entirely different situation arises upon loading this shaft with three tons (an overload), and applying the load dynamically; that is, dropping or throwing it with force in an abrupt and irregular manner as in the bouncing and pounding of motor truck loads due to rough roads, rail crossings, and other causes. It is easily seen that without protective cushioning to offset these brutal shock-stresses the safety factor would be rapidly reduced and the failure or rupture point soon reached.

The term "factor of safety" as applied to a motor truck is probably more often misinterpreted than any other. It does not mean a zone of absolute safety. It does not mean that a member which is designed with a factor of safety of 10 will not break until a stress of 10 times the normal is exceeded. Such a member may fail, through fatigue, under a stress of 2 or it may resist up to 20.

It is a physical fact that the energy of a moving body or the intensity of a blow increases as the square of its velocity. Double the speed of a projectile and its capacity for delivering a blow is multiplied by four. Triple the



Showing Intensity of Shock-Stress and Direction of Force-Arm with Wheel Rotating Clockwise. 1. Increased speed with constant load increases angle "A," changing direction of shock-stress force-arm to a more nearly horizontal plane. 2. Increased load with constant speed increases the intensity "B" of the shock-stress with no change of direction of force-arm. 3. Size of obstruction "C" also affects the intensity of the shock-stress "B" but without change of direction.

speed and the energy is increased nine times. If one bullet has twice the speed of another bullet of equal size, weight, substance, and shape, its penetration will be four times as deep. Similarly if the speed of a truck is increased from ten to thirty miles per hour, each irregularity in the road will cause a shock-stress nine times more violent than at its first speed of ten miles per hour.

Engineering problems, which are comparatively simple when low speed is involved, become enormously difficult when increased velocities must be reckoned with, due to the variable conditions and other factors encountered. This is the reason why it is not practicable to operate railroad trains at ninety or one hundred miles per hour. At such terrific speeds, the lightest irregularities in the rails or wheels

would result in shock-stresses or sledge hammer blows of such intensity as to cause breakage of rails, wheels, and bearing journals. At moderate speeds, say thirty to fifty miles per hour, these irregularities are practically unnoticed, and most certainly do not cause failures, especially in view of the high factors of safety engineered into those parts.

Not only does the violence of road shocks increase as the speed increases, but the direction of their absorption into the truck members changes. A truck wheel bearing a proper load in passing over an elevation at a reasonable speed delivers and receives a shock in a very nearly vertical direction. The shock of the forward movement of the vehicle is small in comparison to its total weight which acts downward. As the speed is increased, the front wheel, in addition to bearing down on road obstructions, strikes a horizontal blow at them. As a result the reaction becomes, instead of a vertical rebound, a backward thrust in a diagonal direction through the wheel and the axle and its mounting arrangement to the frame and the various units of the truck. Here it is readily seen that the higher the speed, the better must be the cushioning to prevent these variably increasing shock-stresses from being transmitted directly from axle to frame and thence to the vital driving units.

How Do You Buy Liability Insurance?

Do you "buy" your Automobile and Workmen's Compensation insurance ... or is it "sold" to you? Send for the names of a few of our policyholders ... write to them ... they will tell you how the American Mutual saved them \$22 out of every \$100 of their insurance premiums last year — (we have always paid dividends of 20% or more for the past forty-two years) — their experience will assist you in making up your mind as to whether you are getting the utmost protection at the least cost ... just fill out and send in the coupon below.

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Policyholders have saved thousands of dollars ... and this, the strongest, largest and oldest mutual liability insurance company in the world has given them, quick, efficient service.

In fact, American Mutual service is of such high quality that 96% of its policyholders renew their policies year after year.

As a part of its service to automobile policyholders, the American Mutual helps prevent accidents. Its engineers have worked with truck fleets that have averaged one accident every 4,000 miles. They have instituted systems of safety that have improved these records to the extent that some fleets now average only one accident every 150,000 miles.

Write for a representative list of our policyholders and let them tell you about American Mutual service, stability and saving.

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Write today for full information about this, the strongest, largest and oldest mutual liability insurance company in the world.

To the American Mutual, 203 Columbus Ave., Boston

Please send me a list of your Workmen's Compensation ☐ or Automobile ☐ policyholders in the following line of business ().

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While increased speed greatly increases the intensity of the shock-stresses caused by road irregularities, it has another effect which seems almost impossible to guard against by ordinary measures. This is the effect of suddenness of shock, due to the inertia of the load.

For example, a door standing ajar on well-oiled hinges can be closed by a gentle shove, but if struck a sharp blow with a hammer the door may remain practically motionless; nevertheless it has suffered a much greater shock and perhaps permanent injury. If a rod is laid upon a table so that the short end overhangs, and it is struck on the overhanging end, it will bend and possibly break, even though a very gentle pressure at the same point would have been sufficient to have lifted the heavier part by lever action.

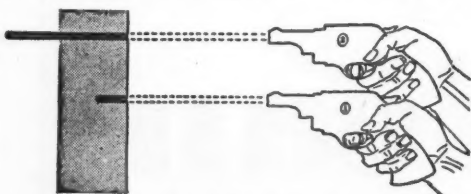
A nail can be driven with a few sharp blows of a hammer, while a man might bear with all his weight on the same nail without forcing it into the wood the least bit. This clearly defines the difference between a dynamic and a static stress. The hammer blows are dynamic stresses and the dead load of the man's pressure is a static stress.

The axle of a truck may be aptly compared to the rod on the table mentioned above. The wheel spindle portion of the axle compares with the overhanging portion of the rod, because there the dynamic stress is delivered or concentrated. The rest of the axle compares with that portion of the rod resting on the table, because the axle is comparatively free to move, being held down by flexible springs which yield readily to gradual pressure.

Going at a moderate speed the truck wheel rises and falls, taking the whole axle with it, but at excessive speed the stresses may come so fast that there is no time for their distribution gradually along the axle and through the springs. The axle suffers a proportional reduction of its factor of safety and may eventually fail precisely as the rod in the experiment.

From this we find the reason for the most destructive effect of excessive speed, namely, vibration. There is no question but that speed is responsible for vibration, which is one of the most serious agents of ruin to which a motor truck is subject.

The answer would naturally be "drive slow." But, business, commerce, and manufacture demand trucks that can travel at reasonably high speeds; therefore we can't always drive slow in order to escape vibration, but we can operate our trucks within speed and load limits set by the designer.

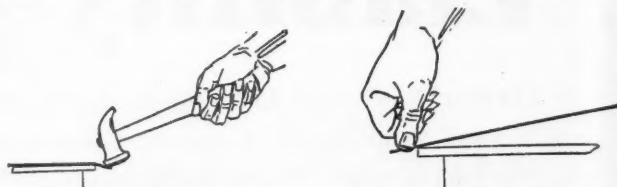


Bullet from Pistol (1) Traveling 1,000 Feet per Second Penetrates 1 Inch. Bullet from pistol (2) traveling 2,000 feet per second penetrates 4 inches. Increasing motor truck speed from 10 to 30 miles per hour will result in shock-stresses of 9 times the intensity produced by the 10-mile speed.

By this is meant one pound added below the springs is equivalent to ten pounds above. Therefore, the elimination of all unnecessary weight below the springs on high-speed trucks is one objective of design.

Overloading is perhaps an even more common form of abuse than over speeding. It is hard to resist the temptation to "put on a little more" and get the same returns that another is obtaining at a greater first cost in the way of greater capacity. The truck user should not be tempted even if the truck will carry it and does not groan or cry out and the power plant seems well able to move the overload at the same speed as a capacity cargo.

As metals are subject to fatigue they can be worn or damaged internally long before showing any signs of strain on the surface. So a truck may be badly overloaded, but as long as it travels at a reasonable rate of speed on a smooth pavement, no harm may result. But let it cross a railroad or two, drop into a few road ruts, back into a curb, or experience any of the many unforeseen occurrences that throw excessive stresses on the axles, bearings, wheels, springs, etc., and internal strains will result. The original factor of safety of 10 may be progressively reduced to 7,



Illustrating the Difference in Effect Between Gradual and Sudden Application of Force as Showing the Greater Liability to Permanent Injury of a Truck Part When Shock-Stresses Are Violently Imposed on the Truck Axle.

then 5, then 2, and finally nothing and breakage. As this method of failure may be due to only slight overloads, the truck owner may be hard to convince that no flaws existed in the material and that the failure dated from some time in the past when he disregarded, perhaps repeatedly, speed and capacity ratings of the manufacturer.

The motor truck of today is not a speculation, but an investment. The time is past when trucks are sold with vague and extravagant promises and bought with mingled misgivings and hopes. With the increasing knowledge of the truck as an efficient carrier has come a better understanding of its limitations as a piece of machinery. It is realized that a truck with proper care may last two, three, or even five times as long as one that is neglected or abused, overloaded, or oversped.



Do You Know Where Your Building Dollar Goes?

These interesting figures given below show the important features in house construction. They are an analysis of how the building dollar is spent and are based upon the construction costs of nine houses varying in price from \$9,000 to \$23,000, and averaging \$15,000.

Every dollar expended is distributed in the following proportion:

	Cents Are Spent	Total in \$15,000 House
For excavating and grading.....	1.8	\$ 270
For masonry	9.4	1,410
For stucco, plaster and tile work....	10.6	1,590
For carpentry	27.2	4,080
For roofing	5.4	810
For flashings, downspouts and gutters	0.7	105
For plumbing	9.3	1,395
For heating	7.0	1,050
For electric wiring and fixtures....	2.7	405
For hardware	2.0	300
For painting and glazing.....	4.5	675
For screens	0.9	135
Total for construction.....	81.5	\$12,225
For landscaping	3.0	450
For builder's profit.....	9.4	1,410
For architect's fee.....	4.5	675
For financing	1.6	240
	100.0	\$15,000

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CHRYSLER MOTORS PRODUCT



Set your own value standards / / then apply them to a Dodge Truck / / /

YOU know what you expect from a motor truck. You know the peculiarities of your business, of your loads, of the conditions under which you must operate—and you know them a little more intimately than any truck manufacturer can.

We know how to build good trucks ... we build that kind—more than a million dollars' worth every week.

With sincere respect for your experience we ask your consideration of our truck ... Set

your own value standards ... Fix on the speed you need, the power, the truck life ... Set up your ideal for size, price, appearance, performance ...

Then inspect the complete line at your Dodge Brothers dealer's ... You'll find your ideal truck, if it's anything under a 4-Ton, whether you want to haul bricks or bouquets, laundry or lumber, petroleum or paving stones ... Body and chassis complete ... Let a painter grace it with your name, then put it to work.

Formerly Graham Brothers Trucks

The complete line of Trucks, Buses and Motor Coaches which Dodge Brothers have been manufacturing and selling under the name of Graham Brothers now take the name of their makers—Dodge Brothers.

These Trucks, Buses and Motor Coaches have always been powered by Dodge Brothers engines. For years they have been built of Dodge Brothers parts in Dodge Brothers plants according to Dodge Brothers standards.

These Trucks, Buses and Motor Coaches are sold, as they always have been sold, by Dodge Brothers Dealers everywhere.

PRICES

MERCHANTS' EXPRESS—110' w. b.	\$ 665
COMMERCIAL TRUCK—120' w. b.	775
1-TON—130' wheelbase	995
1-TON—140' wheelbase	1065
1½-TON—150' wheelbase	1345
1½-TON—165' wheelbase	1415
2-TON—150' wheelbase	1515
2-TON—165' wheelbase	1585
3-TON—135' wheelbase	1745
3-TON—165' wheelbase	1775
3-TON—185' wheelbase	1845

Chassis f. o. b. Detroit

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

NEWS of the FIELD



National Better Home Builders Association Chapter Organized

THE organization of a Westchester County, N. Y., Chapter of the National Better Home Builders' Association was completed at a meeting held at the offices of the New York Title & Mortgage Company at White Plains recently. The regular meeting was preceded by a Round Table dinner held at the White Swan Inn, at which the plans and purposes of the Association were outlined by Mr. H. O. Bell, general manager of the National Better Home Builders' Association.

The movement is intended to eliminate sub-standard construction that has done so much harm to the industry in the past. Members of the association are known as "certified home builders" and as such present to purchasers of their homes a "purchase, loan and resale certificate" as a guarantee to the buyer of the trinity of home building, namely, good design, good materials and good workmanship. The certificate will give full details as to the type of construction, thus eliminating the hidden poor construction so often discovered after the sale is closed.

The following officers were elected to serve for the current year:

Frederick W. Herring, of the Herring Realty & Development Co., of Hastings, president.
William Watson, Bronxville, vice-president.
Harry Rich Mooney, Mamaroneck, vice-president.
Roland O. Trout, Mount Vernon, treasurer.
Blair MacQueen, New York City, secretary.

In addition to the officers, the following directors were elected:

John G. S. Swanston, Ardsley.
John R. Corbin, Westchester Building Associates, Inc., Bronxville.
Richard E. Stinson, Stinson Construction Co., Mount Vernon.
James B. R. Duffy, Jas. B. R. Duffy Realty Corp., White Plains.
J. C. Vreeland, J. C. Vreeland & Son, New York City.
Gladden B. Houck, Port Chester.
Henry Harrie, Jr., Mount Vernon.
C. H. Robinson, Sleepy Hollow Manor, Inc., Tarrytown.
Allen J. Steen, White Plains.
H. P. Burhans, Collins & Burhans, Inc., Dobbs Ferry.
Orlando Kegelman, Ward Carpenter Co., White Plains.
John M. Hunter, Irvington.
T. W. Mills, Chappaqua.

Mr. Charles C. Mullaly, president of the Homeland Company, was named chairman of the associate members' advisory committee, and Mr. Harry Rich Mooney chairman of the publicity committee.



Architectural Competition Plans

THE National Better Homes Architectural Competition, conducted by the Home Owners' Institute and twelve co-operating newspapers, closes at noon on May 31, 1929. This competition is open to all architects, draftsmen and students and carries \$27,500 in prizes. These prizes include a First Grand Prize of \$5,000, a Second Grand Prize of \$3,000, a Third Grand Prize of \$1,500, and 36 Regional Prizes of \$500 each. The competition is for the design of practical, moderate cost homes.

Unlike other competitions, the program provides that competitors must design houses using nationally advertised,



Raymond Hood, Architect, Chairman of Committee of Arrangements and Jury of Awards.

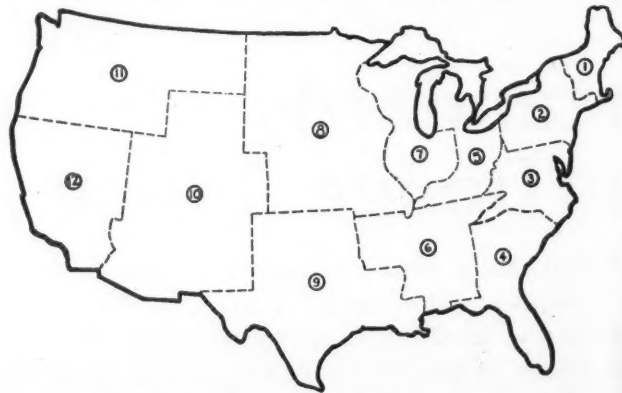


L. Porter Moore, President of the Home Owners' Institute, Which Is Conducting This Competition.

trade-marked, high grade materials which have national distribution. A definite outline specification will be provided with the competition program in order to produce a well-balanced practical home and there will be certain plan restrictions to insure practicability of the house for the average sized lot.

Two types of dwellings will be called for in this competition and all designs must come under the following descriptive classifications: Class A, six principal rooms, including at least three bedrooms, one bathroom and lavatory; class B, seven principal rooms, including at least four bedrooms, two baths and lavatory.

In order to make plans available to the public at low cost, the designers will, in addition to the prizes, receive payment for the preparation of complete working drawings and specifications covering all the prize designs and these will be ready for distribution about four weeks after the prize awards have been made. These plans will also be published in book form and will be distributed nationally.



This Map Shows How the Country Has Been Divided Into Twelve Regions for Regional Competition in the National Better Homes Architectural Competition.

The prize winning designs will be used by the Home Owners' Institute in building its demonstration houses during the year 1929.

Raymond M. Hood, of New York City and Chicago, internationally known as one of the leading architects of this country, will act as chairman of the National Committee of Arrangements for the competition and also as chairman of the Jury of Awards.



THE United States Sand Paper Co., Williamsport, Pa., announces that it has purchased the Federal Abrasive Works, Inc., of Westfield, Mass., and the Standard Abrasive Co., Inc., of Garfield, N. J. These companies will be consolidated as the Standard Abrasive Company, Inc., Garfield, N. J.



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If you want mileage from your tires—long mileage, dependable mileage, regardless of loads and regardless of roads—equip your truck with Fisk Transportation Cords.

These *All-Cord* tires withstand every strain, because they are free from internal friction. The tough

fabric is made of cord *alone*, with no cross threads to complicate its easy action. This revolutionary improvement prevents over-heating and wear inside the tire—gives extra strength to pile up *mileage* under all conditions.

THE FISK TIRE COMPANY, INC., Chicopee Falls, Mass.

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Wall Covering
Most Serviceable
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Washable—Decorative—Easily Applied—Inexpensive—Built up in Linseed Oil—No Surface Cracks—Easily Repaired—Can be removed, permitting any other type of decoration.

The wall is finished in one operation without smudging the woodwork and a uniform texture is assured. Applied to any smooth surface like wall paper.

Made in any color and in a variety of designs suitable for any room in the home, public hall, stores, etc.

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Width of Roll 19½ Inches Trimmed

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New Building for Richards-Wilcox

IN order to take care of increasing personnel, it has been necessary for the Richards-Wilcox Manufacturing Company, Aurora, Ill., to provide more commodious quarters for its office force. The accompanying illustration shows the building which has been erected for the purpose. The



New Building Provided by the Richards-Wilcox Manufacturing Company for Its Office Personnel.

lower floor, where the motor truck stands, is used for the factory office, production, cost accounting and purchasing. The west half of the basement floor is used for storage of office supplies, catalogs, etc. The general administrative office is on the second floor and the entire third floor is occupied by the engineering department. The building is of fireproof construction and with floors of composition cork and ceilings of sound absorbing material.



End-Matched Flooring Tested

END-MATCHED sheathing and subflooring of considerable shorter average length and with joints at random may be substituted for standard length construction lumber with all joints on supports, without significant decrease of efficiency in the stiffness of the construction, distribution of concentrated loads, and alignment of joists, studs or rafters. The use of end-matched softwood lumber for finish flooring laid directly on the joists is inadvisable, however, in living rooms, dining rooms and kitchens, although, under ordinary conditions of service such flooring may, apparently, be used with safety in other rooms.

These conclusions are the result of a study made at the Forest Products Laboratory of the United States Forest Service at Madison, Wis., at the request of the National Committee on Wood Utilization, to supplement its report on "End-Matched Softwood Lumber and Its Uses."



Cutler-Hammer Expands in South

ON December 1st the Atlanta office of the Cutler-Hammer Mfg. Co. of Milwaukee, Wis., moved into new quarters at 150 Peters St., S. W., Atlanta, Ga. In addition to sales and engineering service on motor control apparatus and wiring devices the new location provides warehouse facilities where many types of standard devices will be carried in stock for direct shipment to customers in that territory. This service has been provided to anticipate the requirements of Cutler-Hammer customers because of the increasing electrical power application to industry in this section of the country. A. C. Gibson is manager in charge of the Atlanta office.



Association Name Changed

IT has been announced that the name of the Hollow Building Tile Association, 1400 Engineering Bldg., Chicago, has been discontinued and replaced by the Structural Clay Tile Association, located at the same address.

FOX

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All 19 trucks of N. E. Stone & Company, Madisonville, Ky., are equipped with Goodyear Dump Truck Pneumatics

HAULING ROADS for other tires to run on

Pulling out of the pit, with loose, unpacked gravel beneath the wheels and a truck load of gravel above—that is a job for tires with a strong heart and a husky tread.

N. E. Stone & Company tried many tires in road construction work, before they found the ones which stood up to such grueling conditions. Then they "adopted Goodyear 100 per cent."

The tires they chose were Goodyear Dump Truck Pneumatics, Duals in rear and Singles in front.

These tires are of a special design and build—for excavation work and hauling over soft roads or no roads at all.

The extra-wide All-Weather Tread gives the famous diamond block tread design a full

opportunity to exert its holding power, with extra road contact for supporting the load. Heavy rubber flanges reach far up on the side-walls—providing added side traction and protection from sharp stone gouges or injury from collision with timbers, eye-beams, curbs, etc.

Beneath this tread is the increased vitality of a SUPERTWIST body, and special rubber compounds.

Here certainly is a tire that bites its way out where others spin.

"Since all our trucks have been equipped with the new Goodyear Dump Truck Tire," William B. Stone says in his letter, "we have not experienced carcass trouble such as we did before . . . This is the one brand which gives us low cost per mile."

More Tons Are Hauled on Goodyears Than on Any Other Tires

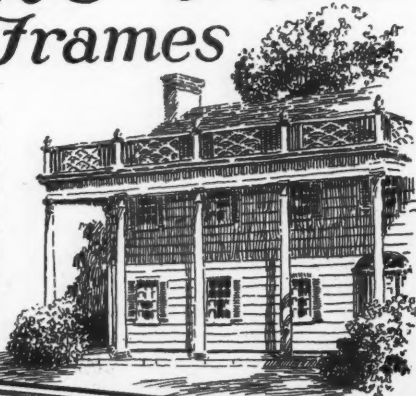
GOODYEAR

Copyright 1929, by The Goodyear Tire & Rubber Co., Inc.

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

the use of Michigan White Pine Frames

THE finest examples of Early American Architecture were built of White Pine (Pinus Strobus). There are many kinds of White Pine, but only in MICHIGAN WHITE PINE are found all the quality features.



10-Point Superiority

- 1 The only Michigan White Pine Frame.
- 2 Gives Freedom from warping, swelling, splitting, shrinking and rotting.
- 3 Lasts the life of the House.
- 4 Takes paint well and holds it long.
- 5 Designed to reflect style and custom for any geographical location.
- 6 For any opening, any size.
- 7 Accurate to the smallest detail.
- 8 Seven complete units in two compact bundles.
- 9 Nailed together in ten minutes by one man.
- 10 Indestructible Mahogany finished, silent and true-running steel pulleys with bronze bearings.

Bradley-Miller
Michigan White Pine
Frames

BRADLEY-MILLER CO.
Bay City, Michigan

Gentlemen: Please send me complete information on Bradley-Miller Michigan White Pine Frames.

Name.....

Address.....

Dealer's Name.....

Address.....

Will Certify Brick Masonry

THE national trade-marking of masonry walls became a fact with the beginning of the new year. The Common Brick Manufacturers' Association of America called on its members throughout the country to adopt the use of a bronze brick, or tablet, as a means of certifying to the quality of the masonry, both materials and workmanship.

For the last two years the Cleveland Clay League, an association of local brick manufacturers, has been certifying the quality of brick walls in buildings of various types, mostly homes. In Cleveland, the certification has meant the use of common or face brick backed up with hollow tile, to insure the owner or prospective buyer of sound masonry construction.

Many builders in Cleveland have turned to building nothing but masonry walls that meet the certification require-



This Trade-Mark Has Been Used by the Cleveland Clay League for the Past Two Years and Has Come to Be Recognized as a Symbol of Quality.

ments, because the Clay League's advertising has caused the public to begin to ask, "Is this a certified wall?" Realtors are finding houses with certified masonry walls easier to sell and re-sell. The contractor takes pride in building a certified wall because it adds to his prestige.

When the hollow bronze brick bearing the words "Certified Masonry Walls" is set into a wall, as a corner stone or other conspicuous place, a certificate signed by the architect, mason contractor, and Clay League is turned over to the owner or builder. The Clay League justifies its signature by making a personal inspection of the work while in progress.

With the co-operation of the U. S. Bureau of Standards and the American Society for Testing Materials, the Common Brick Manufacturers' Association has arranged for the testing of materials and workmanship throughout the country. Types of walls entitled to certification will include either solid brick or Ideal hollow walls; brick facing, with tile back-up; stone or terra cotta facing with brick back-up.

The certification idea will be carried to other types of construction than houses, and, in carrying out the plan, the association will have the co-operation of its 400 manufacturing members, located in practically every state in the Union, with its 17 district organizations, located in New York, Chicago, Philadelphia, Detroit, Cleveland, Los Angeles, Boston, Pittsburgh, San Francisco, Seattle, Portland, Denver, Salt Lake City, New Orleans, Hartford, Conn., Norfolk, Va., and Raleigh, N. C.

for Economical Transportation



This Great New Six-Cylinder 1½ Ton Truck—\$545

(Chassis only) f.o.b. factory
Flint, Michigan



Illustration shows dump body
mounted on Chevrolet 1½ ton
chassis with cab.

32% more Power
**7 inches more
Wheelbase**
**Economy equal to
its 4-Cylinder
Predecessor**
Greater Speed
50% more Capacity
4 Speeds Forward
4-Wheel Brakes

At a price of \$545, the new six-cylinder 1½ Ton Chevrolet Truck makes available a dollar-for-dollar value that has never been duplicated in the commercial car industry!

Its new six-cylinder valve-in-head motor provides a power increase of 32%. It accelerates faster in every gear. It operates smoothly and quietly. And its fuel-economy and cost of maintenance are fully as low as those of its famous 4-cylinder predecessor!

Combined with this increased power and finer performance are a wheelbase of 131 inches and a rugged 189-inch frame—providing a carrying capacity of 1½ tons, with load space up to 9 feet. Throughout the entire chassis are found basic improvements that contribute to its outstanding performance, economy and safety: perfected four-speed transmission . . . ball bearing steering mechanism . . . powerful, quiet 4-wheel brakes, with independent emergency brake . . . and a completely equipped instrument panel!

Investigate this remarkable truck—extremely dependable and economical, it is ideally fitted for *your* business!

1½ Ton Chassis, \$545 1½ Ton Chassis (with cab) \$650 Light Delivery Chassis, \$400
Sedan Delivery, \$595. All prices f. o. b. factory, Flint, Michigan

CHEVROLET MOTOR COMPANY, DETROIT, MICHIGAN
Division of General Motors Corporation

Q U A L I T Y A T L O W C O S T

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER



Beautiful Tile Floors that never Wear Out

Contractors and Architects everywhere are finding in TILE-TEX Resilient Floor Tile the ideal material for flooring large areas such as in schools, hospitals, offices, churches, stores and wherever traffic is heavy, quiet required and long life demanded.

A TILE-TEX Floor is a lifetime floor. It is wear-proof under all ordinary foot traffic. It does not dust or show signs of usage even after years of service. Constant use acts only as a polisher and beautifier of a TILE-TEX Floor.

Composed chiefly of asphalt and asbestos—long recognized for their water, fire, time and wear-resistance—TILE-TEX has all the advantages of these well-known materials. Water does not affect it. Acids cannot injure it. Nothing will stain it and no ordinary element will make it come loose from the sub-floor.

TILE-TEX requires no waterproofing of concrete sub-floors when laid at, above or below grade, and costs less than any other resilient floor tile. Mail coupon for book and name of distributor.

The TILE-TEX Company
Chicago Heights Illinois

TILE-TEX

THE RESILIENT FLOOR-TILE

MAIL THIS COUPON

The Tile-Tex Company,
Chicago Heights, Ill.

Send your book "Floors That Endure" and give name of nearest TILE-TEX distributor.

Name.....

Address.....

City.....State.....



Books, Bulletins and Catalogs for You

THE literature and publications listed here are available to the readers of American Builder. They may be obtained from the firms mentioned and will be forwarded without cost except where a price is noted.

"Kelsey Health Heat," is the title of a booklet published by the Kelsey Heating Company, Syracuse, N. Y., presenting the complete story of its warm air heating equipment.

The Frigidaire Corporation, Dayton, Ohio, has prepared a booklet, "Frigidaire Automatic Refrigerating Systems—Information for Architects and Builders," which is a complete catalog of this line of equipment.

The Heatilator Company, 621 Glen Ave., Syracuse, N. Y., offers a pamphlet illustrating and explaining the operation of its fireplace unit designed to make possible more efficient fireplaces.

The Wright Rubber Products Company, AB-12, Racine, Wis., has published a pamphlet containing an Official Bulletin of Approved Products of the Investigating Committee of Architects and Engineers, covering this company's products, rubber flooring and paving tile.

The American Face Brick Association, 2163 City State Bank Bldg., Chicago, has recently published a booklet under the title, "Wet Walls and Efflorescence—What Efflorescence Is and How to Avoid It," prepared by L. A. Palmer, Research Association, and based upon two investigations conducted at the National Bureau of Standards, U. S. Department of Commerce, Washington, D. C.

The Paramount Electrical Supply & Fixture Company, 930-Z Arch St., Philadelphia, Pa., has issued a very complete catalog illustrating in black and white and in 16 pages of full color its complete line of electrical fixtures, for buildings of all types.

The Detroit Steel Products Company, 2304 E. Grand Blvd., Detroit, Mich., has published a pamphlet on "The Fenestra Way of Daylighting and Airation," presenting its steel window equipment for all types of plant construction.

The General Electric Company, Schenectady, N. Y., has published two booklets under the titles "Novalux Floodlighting Projectors and Searchlights" and "Novalux Electric Fountains," presenting full information on the company's equipment for these types of lighting.

"Arc Welding in Industry," is the title of a booklet prepared by the General Electric Company, Schenectady, N. Y. which illustrates the application of arc welding to groups of basic operations commonly found in industrial plants.

The Portland Cement Association, 33 W. Grand Ave., Chicago, has published a pamphlet containing "Specifications for Plain and Reinforced Concrete—The Water Cement Ratio Method," based on the Proposed Standard Building Regulations submitted by Committee E-1 of the American Concrete Institute, 1928.

The Structural Slate Co., 1204 Robinson Ave., Pen Argyl, Pa., publishes the "Struco Slate Review," containing a number of interesting articles relating to the use of slate in construction.

"Steelcrete Time-Tested Products," is a condensed catalog of Steelcrete Products manufactured by the Consolidated Expanded Metal Companies, Wheeling, W. Va.

W. L. Evans, Washington, Ind., offers Catalog K, on Evans vanishing doors for wardrobes, particularly featuring the Evans ring joint.

The Takapart Division of Hyde-Murphy Company, Ridgeway, Pa., offers a complete catalog on "Takapart, the Patented Portable Partition for Better Business Homes."

The Durabilt Steel Locker Co., 600 Arnold Ave., Aurora, Ill., has issued a pamphlet catalog of its line of steel lockers and equipment.



MAKE THRUSH SYSTEM your SALESMAN!

A GOOD heating plant is one of the most important factors in selling any home. Home seekers have been educated to look for the *hidden values* and mere beauty of design or charming exterior is not enough.

Thrush System is known to home owners for its satisfactory performance. It is *nationally advertised* and the use of Hot Water Heating, Thrush equipped, in the homes you build will not only assure more permanent satisfaction to the ultimate buyer, but will *make the sale easier in the beginning*.

Write for more information.

H. A. THRUSH & CO.
PERU, INDIANA



H. A. THRUSH & CO.,
Dept. B, Peru, Indiana _____ 19____
Please send me your booklet "Which Heating Plant for My Home?" I am interested.

Name _____

Address _____

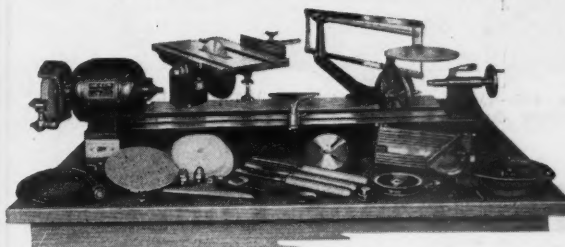
My Htg. Contr. _____



AIR-CON

UTILITOOL

THE KING OF THEM ALL



A Real Work Shop —Right on the job!

The thousand and one uses for a portable work shop—one that you can take right to the job—are ideally met by the Ar-Con Utilitool.

Here is a real man's work shop—not a makeshift or a toy. It is designed not merely to do a wide variety of things, but to do them rapidly and well, and to stand up under constant hard usage. The rugged strength which enables it to handle heavy loads without vibration or chatter also insures the accuracy essential in working to close dimensions.

The sturdy ½ H.P. motor is of the repulsion-induction type—costlier to build than other types, but correspondingly more efficient with its abundance of reserve power and greater freedom from trouble. Its SKF ball bearings, by minimizing friction and wear, insure permanent shaft alignment and maximum power for useful load.

The complete Ar-Con Utilitool consists of a substantial, cast iron bed lathe—31 inches between centers and 8-inch swing—with grinding and buffing head; a circular saw table; jig and scroll saw; sanding disc and table; and complete accessory and tool equipment. Here, at last, is a work shop that will do everything you ask it to do, in the way you want it done.

**Easy to
Buy**

Ar-Con Utilitool units may be purchased singly or in any combination of units that meets your needs. Moreover, the purchase can be made by convenient time payments, if desired. Mail the coupon now for fully illustrated circular and complete price-list, with terms.

**THE AR-CON TOOL
COMPANY**
500 Fassett Street
TOLEDO, OHIO

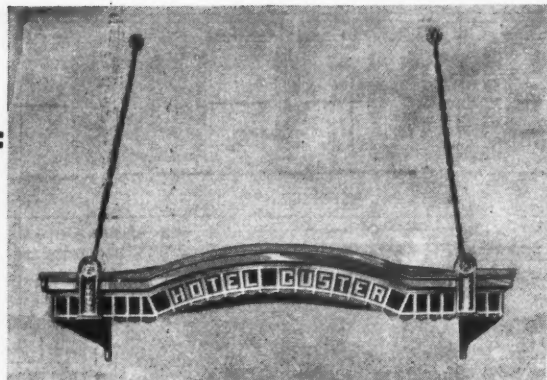
THE AR-CON TOOL CO.
500 Fassett Street, Toledo, Ohio

Please mail complete description of Ar-Con Utilitool, with prices and terms.

Name.....

Street Address.....

City and State.....A



No. 403—Only one of the popular WILLIS designs. Our drafting department is available, at no charge, for plans on special requirements.

The Finer Looking, Better Constructed MARQUISE *are* made by WILLIS

Whenever you see one of these handsome, sturdy new Marquise by Willis—you can rest assured that someone received wonderful value for his money—a Marquise built to brave the storms and winds of decades. You can be equally sure that some wise contractor made a nice profit—a **bigger** profit than you would think. For there is an **extra** leeway between net cost and customers' charge on Willis products.

Why? The reasons are clear as day when you know how Willis products are made. First, because Willis has unrivalled facilities to produce at low cost; **extra** value can be put in materials; second, thirty years of successful experimenting have developed features which make for extremely easy, low-cost installation by contractor. Features which spell better service and less upkeep for customer.

There's a big difference on a Willis job! Both you and your customer can tell it. There's more satisfaction for him; more profit for you. Send for the new Willis catalog—it's brim-full of profit ideas on all kinds of sheet metal goods, as well as on Marquise. Below is the handy coupon.

WILLIS MANUFACTURING CO.
Galesburg Dept. 128 Illinois

FILL OUT—SEND BY TODAY'S MAIL

WILLIS MANUFACTURING CO.
Dept. 128, Galesburg, Ill.

Gentlemen: Please send us, without cost or obligation,
your catalog on Sheet Metal Building Products.

Name.....

Address.....

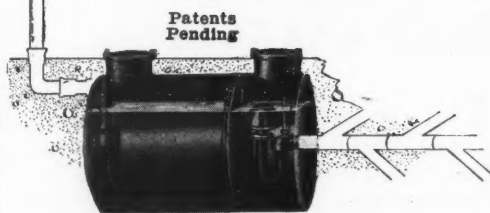
City.....State.....



IMPROVED~ SEWAGE DISPOSAL for UNSEWERED AREAS

THE latest improvement in septic tank design combines the septic process with a siphon drain—in one complete unit. Formerly siphon drainage meant an expensive engineering job—now installation is very simple—costs are lower. Safe, sanitary sewage disposal is a necessity. Adequate sewage disposal facilities greatly increase the values of homes and public buildings in unsewered areas. Selling is made easier. It will pay all builders and architects to investigate the advantages offered by the new improved

San-Equip Siphon System



WATERLESS TOILET FACILITIES

For unsewered construction where the water supply is limited or where disposal of sewage might endanger the water supply—use the improved San-Equip Self-Drain Waterless Toilet. All openings are liquid sealed against offensive odors. No disagreeable care or attention is required. Inside toilet conveniences for farms, summer camps, gas stations, rural schools—easily installed at a low cost. A Chemical Toilet carrying the approval of Health authorities and architects.

San-Equip

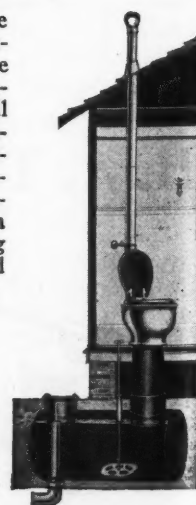
Self-Drain

Waterless Toilets

Write today for free plans and complete details
on San-Equip Siphon Systems and Waterless Toilets.

CHEMICAL TOILET CORP.

921 E. Brighton Ave., Syracuse, N. Y.



370 Rafters.....

506 Studdings
all the Roofing

RIPS • CROSS-CUTS • MORTISES
DADOES • MITERS • GROOVES
GRINDS • SANDS • RABBETS
BORES • TONGUES • BUFFS
TENONS • BEVELS

This machine will handle all material from the lightest veneer to 2½" thickness. It is built sturdy and strong and will carry long, heavy work such as rafters, roofers, etc., as well as flooring, siding, trim, etc. The motor runs from any light socket.

The Table raises and lowers ON A LEVEL and tilts to a full 45 degree angle.

We Also Manufacture

A complete line of woodworking machinery. Saw Tables from \$35.00 up. 4" and 6" Direct Motor and Pulley Drive Jointers. 16" Band Saws Combination Woodworkers. Both Electric Motor and Gasoline Engine outfits. Before buying any equipment it will pay you to get our catalog and prices.

Our TRIAL OFFER protects you from risking a single cent. Whether you are ready to buy or not, we will be glad to send you our free literature.

The Safety-Saw arrived O. K., as I was just starting a building 170 ft. long and 30 ft. wide, 2-story, for summer colony. Last week we cut 370 rafters and 506 studdings and all the roofing for this job, and did every bit of it on this Safety-Saw machine. One man did the sawing and seven men nailed up.
C. A. MRYZEK,
Union Pier, Mich.
Box 92.

U. S. S. MODOC
I have been using a "Safety-Saw" for over a year and I consider it the best bench machine on the market. Carpenter work that must be very rugged and faithful, as it is called upon to run for days almost continuously on all kinds of work. Repairs to life boats, lockers, tables, chairs, desks, and the manufacture of rough work for salvage operations. I found I could always depend on the "SAFETY-SAW."
W. L. DEAN,
Ships Carpenter.

TIME AND MONEY SAVED
ON PRACTICAL WORK

Your "SAFETY-SAW" is handling 80% of my cutting on building. I am ready to start trim-jointing, so send me a 4" saw motor from the same motor as my paid for itself many times over already, and I expect the jointer will do the same.

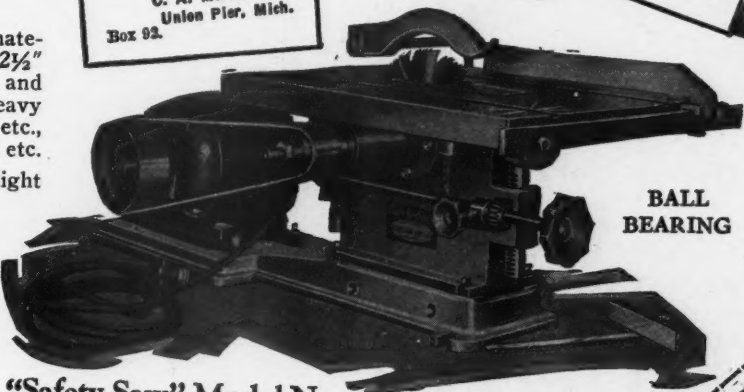
RAY STRODE,
Galien, Ohio.

\$8150

COMPLETE
WITH ½
H. P. MOTOR

and standard equipment as shown. Mounted ready to run.

Other models from \$35 up.



BALL BEARING

"Safety-Saw" Model N

15 Day Trial

SAFE TOOL MFG. CO., BRIDGEPORT, PENNA.

SAFE TOOL MFG. CO., Bridgeport, Pa.
Please send free folder describing the "Safety-Saw" and other bench machines you manufacture. Also free trial offer.
Name..... Address.....
Occupation.....
AB-39

the BEAVER on wheels! PORTABILITY Plus UTILITY

Just what thousands of Builders and Lumber Dealers asked us to build. Well, here it is

Ready to start whenever and wherever there's work to be done. No matter where your job, this outfit can be taken to it. Material up to 3-inch is rapidly and accurately worked on the BEAVER equipped with this sturdy and dependable single cylinder, air cooled gasoline engine. It is always ready for immediate use. No time lost nor expense added for running power lines. Place it alongside of your lumber pile, give the engine a turn and away she goes. It tows safely up to fifty miles an hour.

The "MINUTE MAN" in the woodworking field

That's what Builders and Lumber Dealers call this outfit. Here is a combination woodworker, performing 23 different operations, and always ready to go. It doesn't surprise us that it's always the outstanding sensation at every Building Show where it is shown.

It will save Time and Money for You

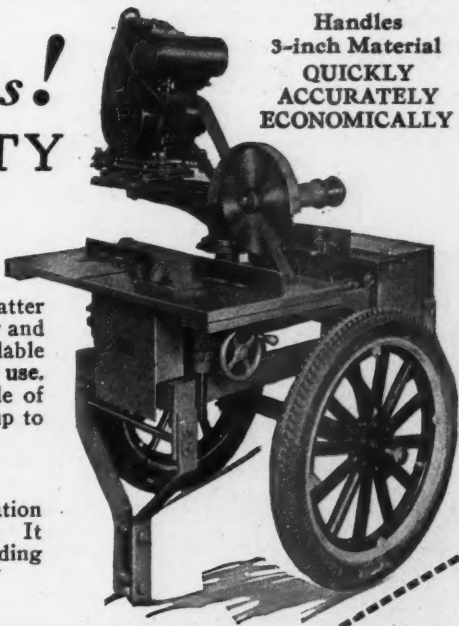
On cross-cutting, mitering, ripping, beveling, dadoing, ploughing, grooving, mortising, tenoning, jointing, rabbeting, boring, etc., the BEAVER does the work of at least five men.

ASK for your free copy of our new catalog

Manufactured and Guaranteed by

HUTCHINSON MANUFACTURING Co., Inc.
NORRISTOWN, PENNSYLVANIA

Sales representatives in most of the principal cities



Handles
3-inch Material
QUICKLY
ACCURATELY
ECONOMICALLY

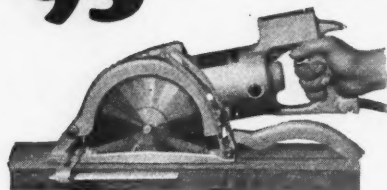
One man can move it anywhere on the job or in the yard

SEND THIS COUPON TODAY
HUTCHINSON MANUFACTURING CO., Inc., Norristown, Pa.
Please send free catalog describing machines and giving prices and terms. Also your free trial offer and time payment plan.
Name..... Address.....
Business.....
AB-3-29

SPEED!

\$95

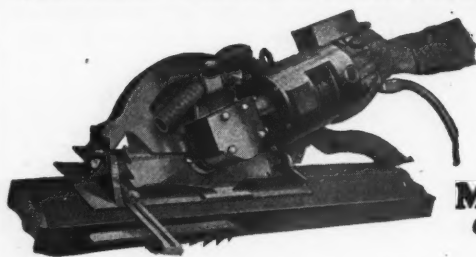
Model K Wodack Saw rips a plank 10 ft. long, 2" thick, in 30 seconds. Compare this speed, and the 2 $\frac{5}{8}$ " cutting capacity with any saw anywhere near the price.



**Cuts
Up To
2 $\frac{5}{8}$ "**

Weighs only 15 lbs. 8" blade and $\frac{1}{2}$ h. p. G. E. Universal Motor. Work on one 6-room house pays for the saw. Let us prove it!

4 Models—here's the most complete!



**Model
"B"**

Bevel Cuts up to 60°! This saw cuts up to 4 $\frac{1}{8}$ " deep with the 11" diameter blade, hence has ample capacity for any rafter cut. Motor delivers 1 $\frac{1}{10}$ h.p. under full load. Connects to light socket.

Important Notice that this saw tilts to the right. The operator can see his line and the Saw Dust Blower sweeps clean. Perfect vision at all times.

Safety Wodacks have original swing guard—are the only saws with this type guard giving protection from blade when making bevel cuts. Safe all the time!

Think it over—Get the Wodack Exclusive Features

Combination Lock Mortiser and Router

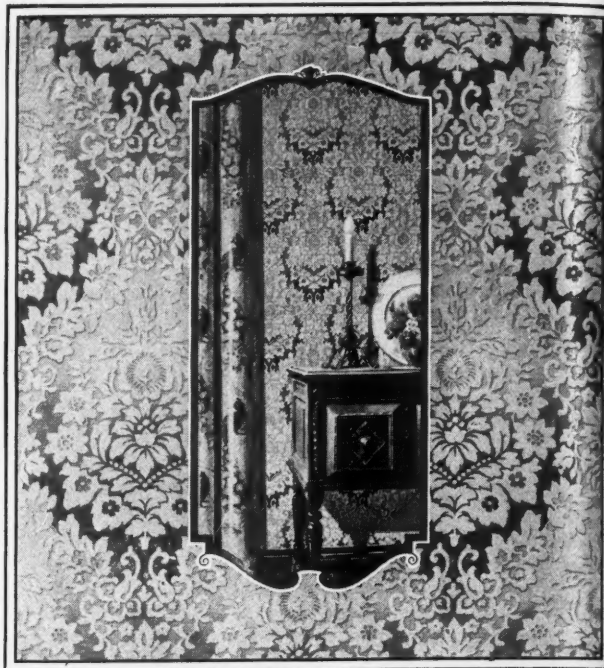


Here's the machine that cuts both the face plate and barrel of a door lock IN ONE OPERATION without stopping. Can cut one mortise in 15 seconds—and we claim 60 doors an hour, allowing time to clamp on each door.

Motor is removable to convert into powerful Router. Sold in Combination or Separately.

*Write for
Demonstration*

F. L. ROGERS & COMPANY
23 South Jefferson St. Chicago
ALSO NEW YORK CITY



*An up-to-the-minute line
for progressive decorators...*

WALL-TEX

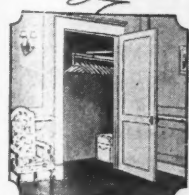
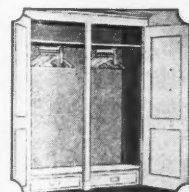
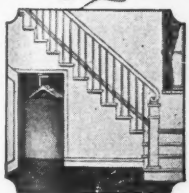
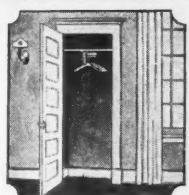
ONLY recently have people realized the importance of strength and utility in creating beauty for decoration. Wall-Tex durable wall covering fulfils this modern ideal. For the strength of a flexible woven fabric lies beneath the charm of its pattern and colors.

Wall-Tex can be wiped clean with a damp cloth—like paint. Spots and finger marks do not mar its beauty. It conceals cracks in old plaster and helps prevent new plaster from cracking. It will add strength to any wall or ceiling.

In design as well, Wall-Tex keeps pace with the newest. Continually, patterns are being added to those now so popular. The line at present is nearly 75% larger than a year ago. You can show your customers many delightful patterns for use in any room, with any color scheme and style of furnishing. In every job of decoration, there are rooms where the quality and beauty of Wall-Tex will create greater satisfaction than any other wall covering. Architects, builders and decorators should write for full information and prices. The Columbus-Union Oil Cloth Company, Columbus, Ohio.

WALL-TEX
DURABLE
WALL COVERING

"They save so much space"



K-V Clothes Closet FIXTURES do save space

Builders now agree that the small clothes closet saves construction costs. K-V Clothes Closet Fixtures—the ideal garment carriers—double the storage capacity of small closets, and provide a convenient method of preserving the family wardrobe. Better still, the clothes closets in new homes equipped with K-V Fixtures immediately attract the attention and admiration of all careful housewives. K-V Fixtures have proved an additional selling feature in hundreds of cases.

Let us send you complete information of this modern device, the easy installation, how it operates, or

Ask Your Dealer!

K-V Adjustable Shelf Supports are needed wherever shelving is used. Easily installed. Write for list of other K-V products.

KNAPE & VOGT MFG. CO.
654 Richmond St., Grand Rapids, Mich.

Knap & Vogt Mfg. Co.,
654 Richmond St., Grand Rapids, Mich.

Please send me information on the following K-V Products: Clothes Closet Fixtures ☐ Shelf Supports ☐ Shoe Racks ☐ Handy Clamp ☐

My dealer is.....

Architect ☐

Contractor ☐

Builder ☐

Write your name and address on the margin and mail.

3000⁰⁰ in Cash Prizes in the **SECOND** **WEATHERBEST Home Modernizing CONTEST**

The famous 1927 WEATHERBEST Contest awarded similar prizes for the best examples of old homes modernized by recovering sidewalls with edge grain red cedar stained shingles. Mr. and Mrs. Clifford J. Foster, Rives Junction, Mich., won the 1927 first prize of \$1000, modernizing their home at a cost of approximately \$800. The 1929 WEATHERBEST Contest, which opened Jan. 1st and will close Oct. 31st, 1929, is even a more generous offer.

First Prize	Second Prize	Third Prize
\$1000.00	\$500.00	\$250.00
Fourth Prize, \$150.00 Ten Prizes of \$50.00 Each	Four Prizes of \$75.00 Each Ten Prizes of \$30.00 Each	

(In event of tie for any prize, full amount of such prize will be awarded to each tied contestant)

Write today for details of this Prize Contest which offers an opportunity for you to help your customers win a cash prize, perhaps more than the cost to modernize. This Contest is extensively advertised in leading Home Building Magazines to create business for builders.

WEATHERBEST Stained Shingles are 100% edge grain red cedar, treated by the WEATHERBEST special process of staining and preserving that assures quality to make satisfied customers for you. Through modernizing with WEATHERBEST, added value, beauty and comfort can easily be given to homes growing old.

WEATHERBEST STAINED SHINGLE Co., Inc., 148 Main St., North Tonawanda, N. Y. Western Plant—St. Paul, Minn. Distributing Warehouses in Leading Centers.

Let us make a modernizing sketch of one of your prospective jobs

Top: an old home in Manlius, N. Y. Center: sketch furnished by WEATHERBEST to show changes suggested. Bottom: the modernized home. Let us tell you how easily you can sell WEATHERBEST modernizing jobs with the help of sketches from our Service Department.



Weatherbest
STAINED-SHINGLES
FOR ROOFS AND SIDE-WALLS

WEATHERBEST STAINED SHINGLE Co., Inc.,
148 Main St., North Tonawanda, N. Y.
Contest Dept.

☐ Without obligation, please send details of 1929 WEATHERBEST Home Modernizing Contest.

☐ Please have your Service Dept. explain the WEATHERBEST Modernizing Sketch Service to help us sell modernizing jobs.

Name.....

Address.....



KIMBALL ELEVATORS in the Home

Put a Kimball in your home—
Why climb the stairs when
there is a Kimball Push Button
Elevator ready to install at
your home?

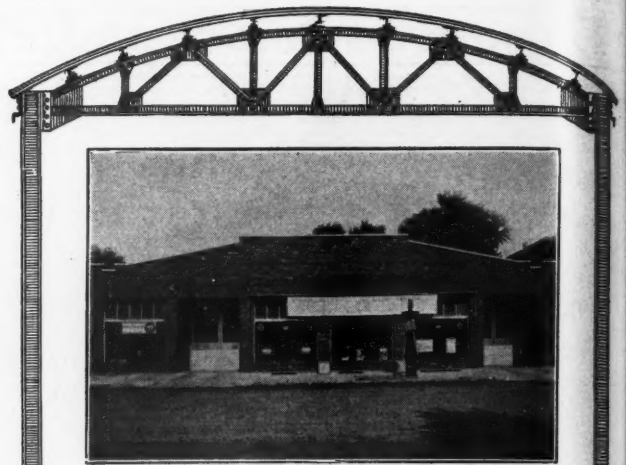
The cost of installation and
operation is small and it will
add greatly to the comfort of
your guests and self.

Kimball Elevators have beauti-
ful cabs built to beautify and
carry out the design of your
home—and the machine is com-
pact, efficient and easily in-
stalled.

Write for Particulars.

KIMBALL BROS. CO.
989-97 Ninth St., Council Bluffs, Ia.

**FREIGHT
LIGHT ELECTRIC
PASSENGER
PUSH BUTTON
DUMB-
WAITERS**



SCHMIDT-DURYEA GARAGE, ST. JAMES, MINN.
Plans and Steel by "International".

There's Profit In Good Garage Contracts

THERE is good money for you
in garage contracts—and now
is the time to land them! When
you hear of a new garage prospect,
interest him in your ability to erect
the kind of building he wants.
Then get in touch with us. We will
supply you with free plans and
estimates, drawn to your specifi-
cations. Hundreds of contractors
have used International Service
to great profit, and International
Steel is used in every state in the
union. Write for free Garage and
Steel Catalog. It will help to give
you some practical talking points
in selling better garage contracts.

INTERNATIONAL STEEL & IRON COMPANY

Evansville Dept. 18 Indiana

INTERNATIONAL PRODUCTS

Store Fronts	Public Garages	Steel Trusses
Steel Columns	Steel Girders	Steel Windows
Steel Ceilings	Elevators	Skylights
Sidewalk Lights	Roof Ventilators	Coal Chutes

Our Complete Stocks Assure Prompt Delivery



Bakelite Molded Door Knobs are made by the National Brass Co., Grand Rapids, Mich.

Bakelite Molded Door Knobs

are made to accepted standards

IT is only in their superior appearance, strength, and durability that Bakelite Molded door knobs differ from others. Their use requires no change or modification of present installation practices.

Unlike metal knobs, those formed of Bakelite Molded cannot corrode, tarnish or get shabby. Their color, whether it be brown, black or a special shade, is permanent. The surface finish, whether lustrous or matte, is lasting.

Bakelite Molded door knobs are a modern improvement over those of other materials, and notwithstanding their many obvious advantages, their cost is so moderate that they may be used in buildings of every class.

If you have not already examined Bakelite Molded Knobs, be sure to do so soon, as no description can do them justice. If your dealer does not stock them, address the manufacturer.

BAKELITE CORPORATION

247 Park Avenue . New York, N. Y.

Chicago Office . . 635 W. 22nd St.

BAKELITE CORP. OF CANADA, LIMITED

163 Dufferin Street . . Toronto, Ontario

BAKELITE

THE MATERIAL OF  A THOUSAND USES

The Bakelite Trade Mark and Bakelite designation have been registered in the United States and other countries by Bakelite Corporation. Under the name "B" the corporation sells its products in various forms. It certifies to the quality of its products and to the fact that they are made of Bakelite.

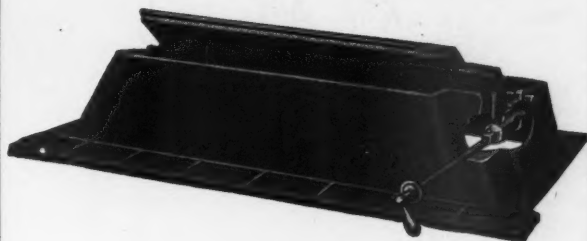
PEERLESS

Building Specialties

PEERLESS

FIREPLACE DAMPERS

are trouble savers



There is nothing which can cause more dissatisfaction to the home owner than a fireplace which will not burn properly. And unfortunately there are still many of them being built. The easiest and most effective method of assuring correct fireplace construction is to install a Peerless Dome Damper which forms a perfect fireplace throat and allows complete control of the draft with its easily regulated door. The door and dome are made of heavy stove plate cast iron. There are three styles of controls which will meet any requirement. Made in all necessary sizes.

Other Peerless Home Conveniences

COAL WINDOWS ASH DUMPS

ASH PIT DOORS

PACKAGE and GARBAGE RECEIVERS

PEERLESS MFG. CO.,

324 W. Main St., 3-29

Louisville, Ky.

Kindly Check

☐ Contractor ☐ Architect
☐ Home Owner ☐ Dealer

Please send Peerless Fireplace Damper Information.
☐ Other Building Specialties.

Name.....

Address.....

Town....., State.....

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"REMEMBER—

*in all our
buildings*

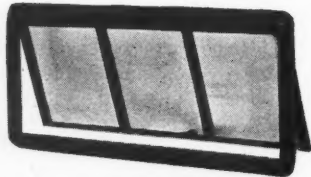


KEWANEE

Copper Steel

BASEMENT WINDOWS

I've noticed that whenever we use an attractive, unbreakable window like the KEWANEE that it not only adds that modern touch to the building, but actually makes our clients more satisfied. It certainly is a lot easier to sell a home in which the basement is as light as any room in the house. Kewanee Windows cost no more than ordinary windows, so let's be sure that we use them from now on.



They make the basement 75% lighter—and they're guaranteed unbreakable"



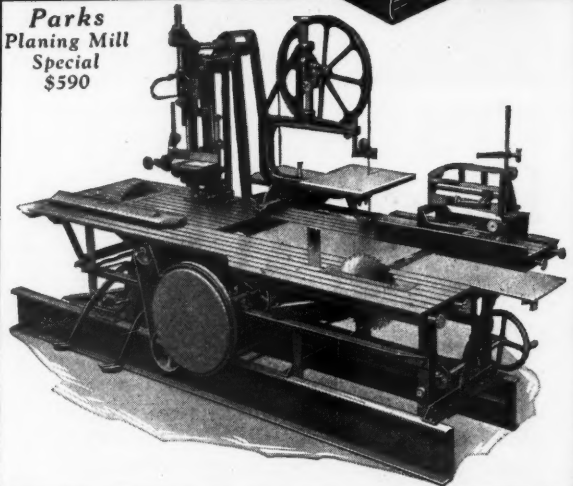
Dealers: Write for our attractive offer

KEWANEE MFG. CO.
309 Tremont St. KEWANEE, ILL.

Your first job this month!



Parks
Planing Mill
Special
\$590



Most contractors have their jobs well lined up for the rush building season.

Now it's a matter of putting those jobs through *at a profit.*

That means watching *payroll dollars*, because you can't cut down on material and you can't cut quality, but you can cut labor time—with a Parks!

This year more than ever before contractors' profits depend on *equipment.*

That's why your first job this month is—*Get a Parks!*

Better work—at more profit per job. If you haven't a Parks catalog send for it today.

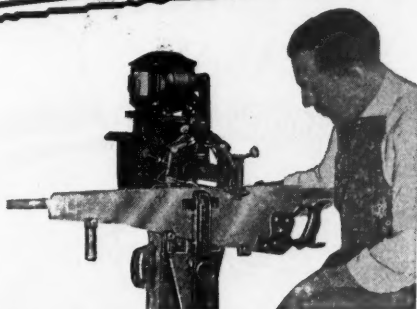
THE PARKS WOODWORKING MACHINE CO.
Builders of quality woodworking machinery since 1887
Fergus & C. H. & D. - - Cincinnati, Ohio
Canadian factory: 338 Notre Dame East, Montreal

PARKS

WOODWORKING MACHINERY
EVERY PARKS IS GUARANTEED FOR TEN YEARS

Langley Says—

"Every Foley-Filed Saw Is a Boost—"



"If I could not get another Foley Saw Filing Machine, I would not take a THOUSAND DOLLARS for the one I purchased. I do commercial filing in my spare time and also keep my own saws in first class condition. Every saw filed on the Foley is a boost for more business. Users can't say too much for the work the saws do in the way of cutting cleaner, truer, easier and faster than they ever cut before." C. E. LANGLEY.

Keep Your Saws Sharp And Make Money, Too

Our FREE PLAN will tell you how you can MAKE EXTRA MONEY in your spare time, and also keep your own saws in first class condition. There's nothing else like the Foley—it files saws better than the most expert hand filers, and at the same time automatically evens up the teeth so every tooth cuts.

FOLEY AUTO MATIC SAW FILER

Files all kinds of hand saws, band saws $\frac{1}{8}$ " to $4\frac{1}{2}$ " wide and cross-cut circular saws 3" to 24" diameter, with such mechanical accuracy that they cut better and faster, and stay sharp longer. Saw users insist on having their saws filed on the Foley after they have used a Foley-filed saw.

Our FREE PLAN Starts You

Many men have more than paid for their Foley Automatic Saw Filers with the money they have made filing saws for carpenters, contractors, and others. Our FREE PLAN will tell you how YOU can do it—

Mail This Coupon Today!

FOLEY SAW TOOL CO., Inc.
339 Main St., N. E., Minneapolis, Minn.

Send me your FREE PLAN telling how I can make money with the Foley and keep my saws in perfect condition.

Name.....
Street.....
City..... State.....

You'll See It Ten Years from Now!

TWO new buildings—exactly alike—the same construction—the same appearance. But—one is protected with HYDRO PROOF Products.

Ten years later—compare the two! One is showing signs of decay—cracked walls, falling plaster, warped woodwork, leaky roof. Atmospheric moisture with its continuous pollution is at work. Constant trouble and costly repairs are at hand.

The other, being preserved with HYDRO PROOF Products remains like new—roof, walls and floors in perfect condition—a lasting tribute to a wise builder. He knew HYDRO PROOF—pure asphalt in liquid form which permanently seals all surfaces against the destructive effects of moisture, alkalies, smoke, acids and other atmospheric reactions.

Applied to foundations—inside or out—HYDRO PROOF Liquid Asphalt assures dry, damp-proof cellars, absolutely impervious to disintegration and corrosion. As a roof coating, it prevents costly leaks and expensive repairs. For the preservation of interior decorations, HYDRO PROOF Plaster Bond applied to the inside construction without furring or lathing is an insurance against moisture and unsightly stains. For repairing and resurfacing floors, HYDRO PROOF 1-2-3 Formula produces a waterproof, dustless, resilient surface, smooth for traffic, easy to walk upon and which materially decreases industrial fatigue.

Whether used as a waterproofing and bonding material or according to the 1-2-3 formula, HYDRO PROOF dries and sets quickly. Floors resurfaced with 1-2-3 HYDRO PROOF are ready for use 36 hours after laying.

Builders, contractors and architects who specify HYDRO PROOF Products add years to the structures they erect.

Other asphalt products manufactured are SILVER-SEAL Aluminum Paint; BITUMET, a protective coating for metal against corrosion; and BRUSHING PLASTIC, an asphalt asbestos roof coating.

Specification sheets, prices and working samples will be sent upon receipt of coupon below.

THE ASPHALT PRODUCTS CO., INC.
703 Free Street Syracuse, N. Y.

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THE ASPHALT PRODUCTS CO., Inc.
703 Free St., Syracuse, N. Y.

Without obligation, please send me complete information, specification sheets, and sample of

- | | |
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| <input type="checkbox"/> 1:2:3 Hydro Proof | <input type="checkbox"/> Bitumet |
| <input type="checkbox"/> Silver Seal | <input type="checkbox"/> Brushing Plastic |

Name.....
Address.....
City..... State.....

No Damp Apartments in this Building —It's Waterproofed with "ANTI-HYDRO"

All exterior stucco surfaces of this apartment house are permanently hardened and waterproofed with "ANTI-HYDRO." It keeps the various colors of stucco in this building in their original tints and tones. Even after a heavy rain the stucco is not stained. The stucco cannot chip, craze or map-crack. And the interior is always dry.

When you use "ANTI-HYDRO," you can guarantee a watertight job and one that will not require continual repairs and patching which eat up your profits.

"ANTI-HYDRO" is economical to use because it both hardens and waterproofs stucco **in one operation**. It makes stucco bond securely to brick, tile and concrete. When applied on metal lath, it protects the lath against rusting.

"ANTI-HYDRO" is easy to use. It mixes readily—without the aid of skilled labor—with the water used to wet down cement stucco.

For 25 years "ANTI-HYDRO" has been producing highly satisfactory results on every type of concrete hardening and waterproofing work. Use it on your next job for guaranteed results.

ANTI-HYDRO WATERPROOFING CO.

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Newark, N. J.



APARTMENT HOUSE
ATLANTA, GA.



MARCUS W. BUTTRILL... ARCH'T.
J.H. WHISENANT... OWNER & B'LD'R.

The NEW WAY
TEN TIMES FASTER

100%
SAFEGUARD

The OLD WAY

ALTA
ELECTRIC
HANDSAW

DURABLE
POWERFUL
SAFE

The ALTA Electric Handsaw is SAFE. That's IMPORTANT! Three Sizes.

Please demonstrate on my job—

Name.....

Address.....

City & State.....

WAPPAT
GEAR WORKS, INC.
7526 Meade Street
PITTSBURGH, PA.

SAWS
MORTISERS
PLANES



ASBESTONE *Flooring* for Lasting Service *Plus* Distinctive Beauty *Hygienic, Fireproof, Easy to the Tread*

ASBESTONE plastic magnesia flooring—durable, beautiful, comfortable, economical, is decidedly appropriate for hospitals, schools, churches, office buildings, hotels, apartments and residences.

ASBESTONE affords a jointless, smooth, sanitary surface, that is easy to the tread, non-slippery, and noiseless, giving maximum comfort. First cost is moderate, the upkeep practically nil. It will withstand years of severe wear. ASBESTONE flooring preserves its fresh new appearance for years; it is stain-proof, easy to clean and may be waxed and polished. Easily applied over any old or new sub-floors, at any angle, over and around any irregularities.

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FRANKLYN R. MULLER, INC.

ESTABLISHED
1906

Manufacturers of Asbestone Flooring and Sana-bestos Tiles

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"THE BEST MODERATE PRICED FLOORING KNOWN TO SCIENCE"

MORE PROFIT! THAT'S WHAT YOU WANT ON EVERY JOB! ELIMINATE COSTLY METHODS AND YOU'LL GET IT!

\$35⁰⁰
BRINGS IT
TO YOU

8
MONTHS
TO PAY

The "JIFFY" H.P. PORTABLE GASOLINE SAW RIG

Bigger Income, Prestige, Success Easily within Your Grasp

Why pay out of the profits that should jingle in your own pockets, wages to unnecessary help? Why hire 10 men to do one man's work? Facts are facts. Old methods are costing you money. Equipped with this Saw Rig bigger success and income are easily within your grasp. It has done it for others. It will do it for you!

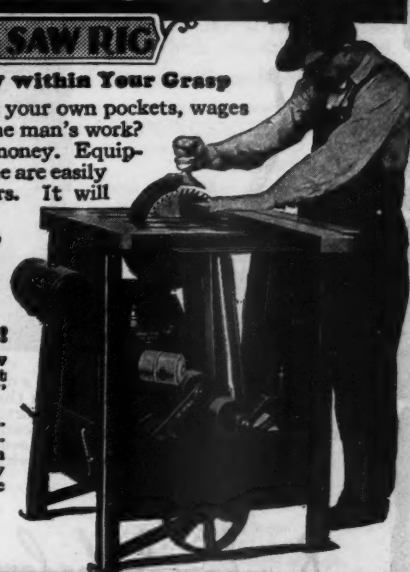
DOES THE WORK OF 10 MEN WITH HAND SAWS!

Just realize! Save 85% of hand sawing on any job! Does anything that a hand-saw can do, only ten times faster, more accurate, better. It cross-cuts, rips, mitres, dados, rabbets, etc. Works up 8,000 to 10,000 feet a day with one man operating—the work ordinarily of ten men! Simple, efficient, economical. Arbor type saw; moves through lumber; not lumber through saw. Rigid, all steel table top, 24x32 inches, and frame. Comes fully equipped with saw blades, guides, etc. Compact, air-cooled, powerful motor. Mounted on wheels. You take it from cellar to attic.

What Users Say!

"I have used the Saw Rig four weeks and it has paid for itself."

"Perfectly satisfactory from the standpoint of operation and has saved many times the cost of the machine."



Investigate! This Means Much to You!

Costs nothing to get valuable booklet of wonderful facts about this Saw in all construction work—the 10 day Free Trial offer and Easy Payment Plan. This is your opportunity for bigger success; maybe the turning point in your career. Don't pass it up. At least, investigate!

A. S. ALOE COMPANY
1808 Olive St. St. Louis, Mo.

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A. S. ALOE CO., 1808 Olive St., St. Louis, Mo.
Without obligation, send me FREE booklet, "Sawing With Elbow Grease or Gasoline". Also particulars of your "Jiffy" Saw Rig and details of your Easy Payment Plan.

NAME.....

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WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

With Every Loop of the Rope You Add Power and Lower Effort

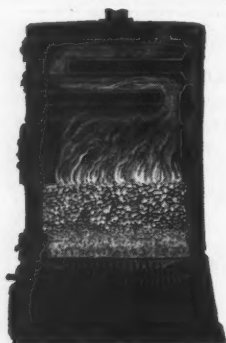
YOU know that's true of ropes and pulleys. It's no less true of boilers.

Every loop of fire travel gives more heat for the fuel you burn; the same heat with less fuel.

Burnham Boilers are many-loopers. That's how they get in so many more feet of fire travel, which, as you know, makes fuel bills so much less.

You'll find Burnhams mighty satisfactory fuel thrift boilers, wherever you put them to work.

There's a Burnham style and size for every heating purpose. Look it up in our latest Catalog.



This round Burnham has a three-times-back-and-forth fire travel. You can add loops if you need them; another loop with every section.

Burnham Boiler Corporation

Irvington, New York

Representatives in all principal cities of
the United States and Canada

Millions spent annually create builders insistence for Rustproof Products



... a good Reason for standardizing on Grand Rapids Pulleys

OUR complete line of sash pulleys furnished in Zincote finish offers you a splendid opportunity to capitalize on the insistence for rust-proof pulleys.

Recognized as the finest—Grand Rapids Pulleys cost no more than ordinary pulleys. For over a quarter of a century the majority of the trade have standardized on this complete and superior line. Obviously it pays.

Catalog, samples and prices gladly furnished on request.

GRAND RAPIDS HARDWARE CO.

556 Eleventh St.

GRAND RAPIDS, MICHIGAN



News!

Win-Dor Casement Operator

now only

\$1.85

Improve the houses you build by making the casements *convenient!* Win-Dor Series No. 7 operator opens or closes wood or steel casements *through* inside screens; locks them automatically and positively in any position. Fits all sash.

Send Now
for complete price list

THE CASEMENT HARDWARE CO.,
402-A North Wood St., Chicago, Ill.

Please send illustrated price list on Win-Dor Hardware

Firm Name _____

Att'n: _____

Address _____

City _____ State _____



ARCHITECTURE

Learn at Home

HUNDREDS of men have become successful architects through the home-study courses of the International Correspondence Schools.

The textbooks are complete and practical, and are so well regarded by educators that they are used by many leading colleges and technical schools, including Cornell, the Iowa State College of Agriculture and many others.

George A. Griebel, who was a stone cutter when he enrolled with the I. C. S., is now making \$10,000 a year and was Superintendent of General Construction for the State of Ohio for two years before he opened his own office.

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The first step these men took was to mark and mail an I. C. S. coupon similar to the one below.

Make your start the same way and make it right now. We'll gladly send you *free* information about the I. C. S. courses in Architecture or any other course in which you are interested.

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"The Universal University"

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Without cost or obligation, please send me a copy of your booklet, *Who Wins and Why*, and full particulars on the subject before which I have marked X:

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| <input type="checkbox"/> Electric Lighting | <input type="checkbox"/> Railway Mail Clerk |
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| <input type="checkbox"/> Telegraph Engineer | <input type="checkbox"/> Mining Engineer |
| <input type="checkbox"/> Practical Telephony | <input type="checkbox"/> Gas Engine Operating |
| <input type="checkbox"/> Mechanical Engineer | <input type="checkbox"/> Textile Overseer or Supt. |
| <input type="checkbox"/> Mechanical Draftsman | <input type="checkbox"/> Traffic Manager |
| <input type="checkbox"/> Toolmaker | <input type="checkbox"/> Airplane Engines |
| <input type="checkbox"/> Machine Shop Practice | <input type="checkbox"/> Automobiles |
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| <input type="checkbox"/> Chemist | <input type="checkbox"/> Poultry Raising |
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| | <input type="checkbox"/> French |
| | <input type="checkbox"/> Radio |

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Street _____

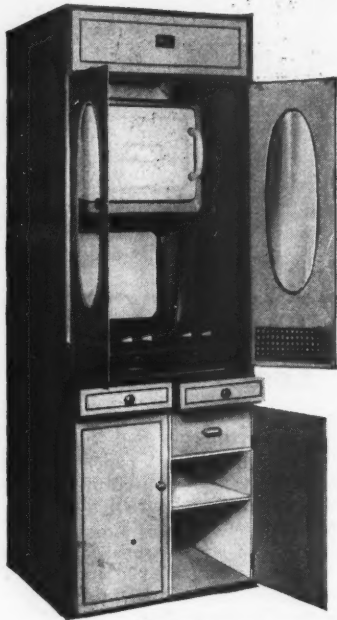
and No. _____

City _____ State _____

Occupation _____

If you reside in Canada, please send this coupon to International Correspondence Schools Canadian, Limited, Montreal, Canada

Parsons
Pureaire
CABINET
(PATENTED FOREIGN)



No. 500

Attracting Wide Attention

Since the introduction, just one month ago, both architects and apartment builders have shown a great interest in the Parsons "Pureaire" Cabinet.

They see in this new cabinet just the development they have been waiting for.

Standard Apartment Stove fits right into cabinet. Close doors and you have an attractive piece of furniture.

Direct Flue connections carry off all cooking odors, heat and grease. No fan or moving part to get out of order.

Keeps the apartment clean and the air pure. Saves redecorating and cleaning and enables you to get more rent.

Parsons "Pureaire" Cabinet is substantially built—channel frame construction, securely welded.

Artistic design. Built by men who know big production, hence prices are right.

Cabinets furnished with shelf and storage compartments below or space for refrigerating unit.

*Write for complete details today.
Liberal Proposition for Dealers.*

The Parsons Company
603 Milwaukee Ave., East,
Detroit, Michigan

Cut Nails Cut Costs

Because Reading Galvanized Cut Nails have almost unlimited endurance—because their four gripping surfaces hold them

permanently tight—they cut down repair costs wherever they are used.

And because they go straight through hardwood without bending, they save a carpenter's time and temper. It takes fewer Reading Cut Nails, too, to make a firm job.

Explain these qualities of Reading Cut Nails to your customers. You'll find them ready to listen—and ready to come back with profitable "repeat" orders, once they have tried these superior nails.

Write for the Reading
Cut Nail Catalog today.

READING IRON COMPANY
Reading, Pennsylvania

Atlanta	Detroit	St. Louis
Baltimore	Houston	Tulsa
Boston	Los Angeles	San Francisco
Buffalo	New York	Fort Worth
Chicago	Pittsburgh	Seattle
Cincinnati	Cleveland	Philadelphia
	New Orleans	

READING Cut NAILS

Make Every Old Roof and Cement Floor Show You a Big Profit



Easily Applied with Brush, Trowel or Squeegee.

MALLEABLE ASPHALT [Mastic]

Roofing and Flooring Compositions

The Materials That Are Creating a Sensation

SALESMEN WANTED—

If you know building materials and have a little sales ability, you can make big money helping builders and contractors make sales. We need men to act as District Sales Supervisors or Local Salesmen. Write at once for details. Our unusual co-operative sales plan is "bringing home the bacon" and making real money for all concerned. (State whether you are interested as a Dealer, Contractor or Salesman.) Hundreds of territories have been allotted, so write at once—don't delay.

DEALERS—

You can adopt the chain store principles; make from 50 to 100 turn-overs every year and earn from 200 to 500 per cent profit on a ridiculously small investment. Write us and let us tell you about it.

CONTRACTORS—

Make a two-way profit—one on the sale and one on the application. Here is a wonderful opportunity for you to specialize.

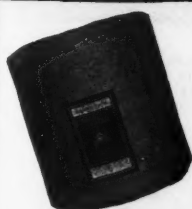
MALLEABLE ASPHALT COMPANY

DEPT. X, 6355 BROADWAY,

CHICAGO, ILL.



2 FLOOR PAPERS of UNUSUAL MERIT...



Behr-Manning
Durundum Paper



Behr-Manning
Garnet Paper

Use the coupon now to
get more information on
these two papers

You Need Two Papers ♦ ♦ ♦

ON newly laid, hardwood floors, Behr-Manning Durundum gives you speed, economy and finish unexcelled by any other paper. This electric furnace abrasive makes short work of the hardest oak or maple flooring.

FLOORS that are old, and covered with varnish or shellac, quickly ruin any sheet of abrasive paper. To maintain your profit, you need the best low cost paper you can get. Behr-Manning Garnet is the paper for the job.

BEHR-MANNING • Troy, N. Y.



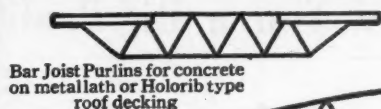
Behr-Manning
P. O. Drawer 74, Troy, N. Y.

Please send me information and prices on the 2 Behr-Manning Floor Papers.

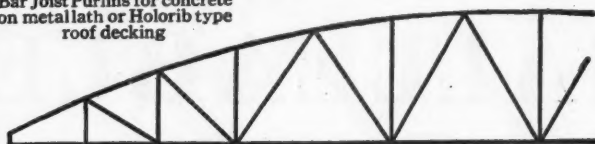
Name

Street

City..... State.....



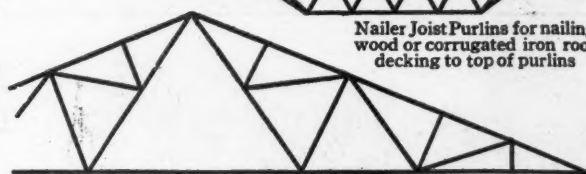
Bar Joist Purlins for concrete on metallath or Holorib type roof decking



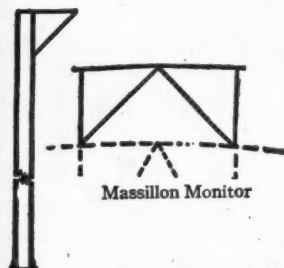
Massillon Curve Chord Trusses



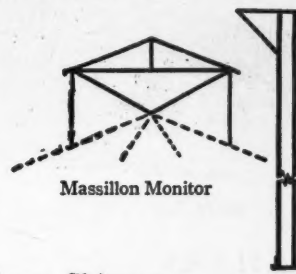
Nailor Joist Purlins for nailing wood or corrugated iron roof decking to top of purlins



Massillon "A" Type Trusses



Massillon Monitor



Massillon Monitor

"H" Columns

"H" Columns

Steel Construction

for Commercial and Industrial Buildings, Airplane Hangars and Garage Buildings

STEEL insures **STRENGTH** and **SECURITY** where "Massillon Standardized Steel Building Products" are used. The standardization of these products invariably speeds up the completion of the building and results in lower costs.

As an example of this standardization, standard stock size roof trusses are provided for all loads for spans up to 100 feet. In a similar manner, standard stock size purlin sections are provided

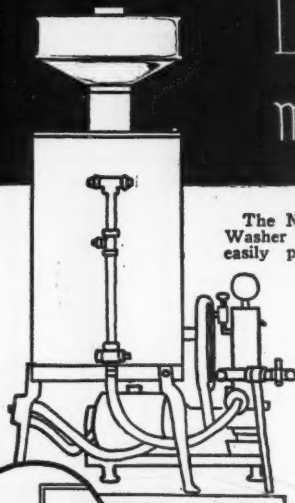
for all types of roof deckings. Shipments are always prompt.

The contractor who builds with Massillon products has every advantage of the "standard steel building" plus the fact that these standardized products can be provided to meet the individual requirements of his client.

Send us a sketch or set of plans for your next building of this type and let us show you how Massillon construction can benefit you.

THE MACOMBER STEEL COMPANY, 909 Belden Avenue, CANTON, OHIO

Let this **NIELCO** Lightning Washer make \$20⁰⁰ a day for you above your wages



The NIELCO Lightning Washer is a self-contained, easily portable unit weighing 300 lbs. and mounted on a rigid steel base, rolling on steel wheels. It consists of an automatic feeding hopper for the compound, a mixing chamber, a motor-driven pump and five hose connections.

Do you want to get into a profitable business that makes a remarkable return on the capital invested—requires little capital—that is good the year 'round—that you can manage along with your other activities or devote your whole time to—that will give you a monopoly, free from all competition? Then get into the business of

Washing Buildings

cleaning basements, washing automobiles, spraying whitewash, disinfectant and germicides, flushing out sewers, cleaning railway cars, buses and boats.

Every building to be painted should first be washed. And often a good washing reveals the paint in good condition and the building doesn't require new paint. This system does the washing five times faster than the bucket and sponge method. A cord plugged into any lighting socket runs the motor. NIELCO Washing Compound, automatically mixed with water, is forced under pressure to the mop in the hand of the operator, the compound removes the film of dirt—the clean water stream rinses the job.

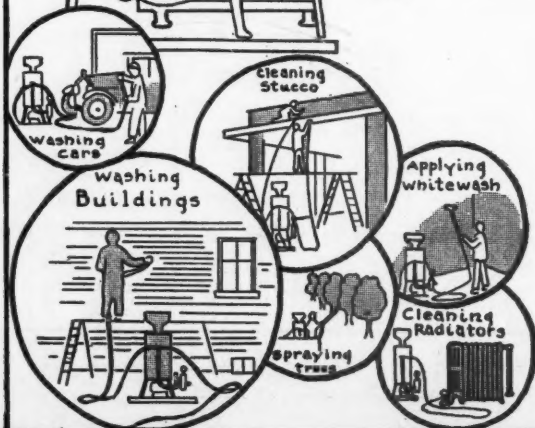
The average charge for washing a house is 2c a square foot. At a total operating cost of \$17 (which includes their own wages) two men can clean an 1850-ft. surface in eight hours.

Exclusive Territory

We equip you to do all the cleaning operations mentioned above, show you how to get the business and give you exclusive territory without franchise fee. You operate as many outfits as your trade requires and you clear at least \$20 per day profit on each outfit. You become the local operating unit of a country-wide organization of maintenance companies. You are absolutely independent. Write or wire before some one else gets the NIELCO franchise for your town.

NIELCO

Division of Consolidated C. M. Corp'n.
913 E. Beecher St. - Adrian, Mich.





BEAUTIFUL HOMES

Are now sturdily built, "For the ages," of blocks perfectly made with



And the demand for homes built of durable blocks that cool the summer heat and repel the bitter winds and damp weather is growing.

The Miles Lines Is Complete

It includes face down block machines, hand strippers, power strippers, power tampers, elevators and feeders. See a Miles plant in operation before you decide and ask the user to tell you about its performance. There is one near you. Write and let us tell you where. And remember that Miles are the pioneer builders of concrete equipment in the United States, having been in the business over thirty years.

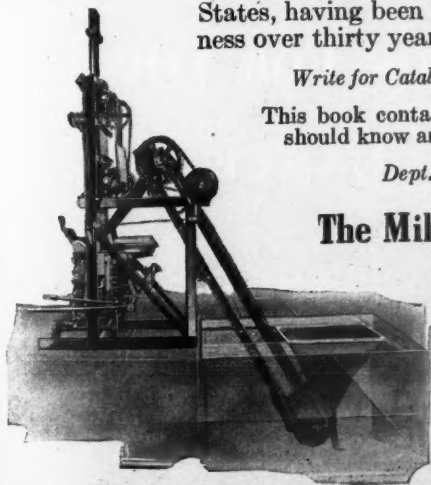
Write for Catalogue

This book contains much you should know and it is free.

Dept. 5

The Miles Manufacturing Co.

**Jackson,
Michigan,
U. S. A.**



A new CABINET with a NEW conception of Design and Construction



AVON

One of the many exclusive styles—one piece construction throughout. Continuous piano type hinge, will not sag or warp. Fitted with bulb edge glass, shelves notched in place, yet easily removed for cleaning—an exclusive feature. Heavy brass spring catch—positive in action. Door catch designed to cushion door action. Special device permits 90 degrees opening and prevents mirror breakage. All accessories heavily nickled. Lustrous enamel finish.

Patent Pending

Corcoran Cabinets are the original One Piece Steel Cabinets. No cracks—No seams—No welded joints—No raw edges.

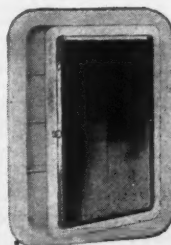


LOOK FOR THIS SEAL

The first truly one-piece CABINET----

Now for the first time—Corcoran Bathroom Cabinets with rounded corners inside and out, provide perfect harmony with other bathroom equipment, at the same time affording real sanitation and cleanliness through actual one piece construction. Corcoran Cabinets are drawn from one continuous piece of steel, an impenetrable barrier against the deteriorating effect of wall moisture and corrosion. This is one of many exclusive features of Corcoran construction. Nineteen models available in full Venetian mirror door and Colonial Mirror and Regular Insert type cabinets. Write today for catalogue, detailing complete line of these new and better cabinets.

The CORCORAN MFG. Company
NORWOOD CINCINNATI, O.



INSERT CABINETS
Style No. 40 and 400

One of many popular models in the regular insert type cabinet. Same one piece construction as Venetian mirror type—no cracks—no seams—no welded joints—no raw edges.

Corcoran Cabinets are sold through jobbers only. Distributors who are equipped to handle this superior line in available territory, will be interested in the details of a proposition with unequalled possibilities for profits. Write at once.

CORCORAN MFG. CO. Dept. AB
Gentlemen:

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City.....State.....

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*—win a higher place and bigger pay through
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Many have told us that the most important step they ever took in fitting themselves for a bigger place was enrolling with LaSalle for home-study training in Personnel Management—training that showed them how to classify jobs properly, how to pick the right men and women for those jobs and train them for more efficient work, how to provide intelligently for their well-being, how to interest them in the company they worked for, keep them happy and contented.

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13 Men that's a load

EVERLASTING BRACKETS

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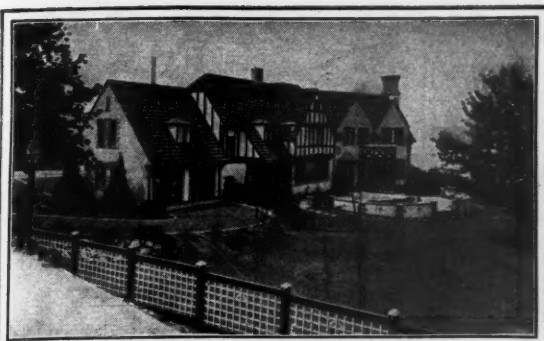
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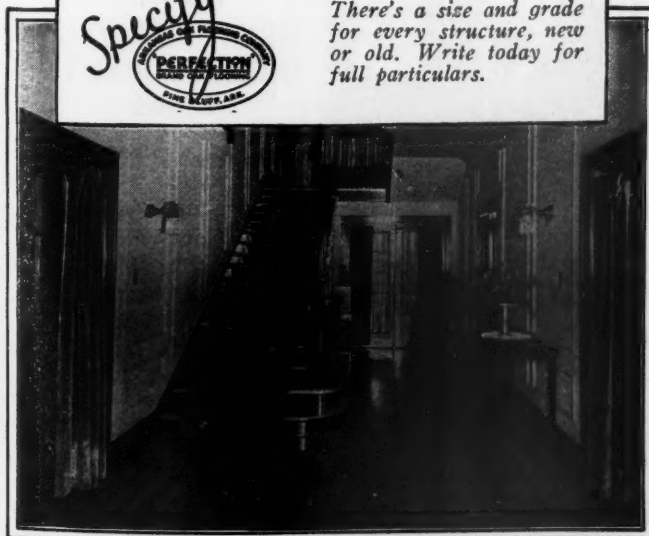
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7 OUTSTANDING FEATURES

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"Fits in" any home,
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Fiat

Shower Bath
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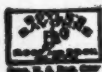
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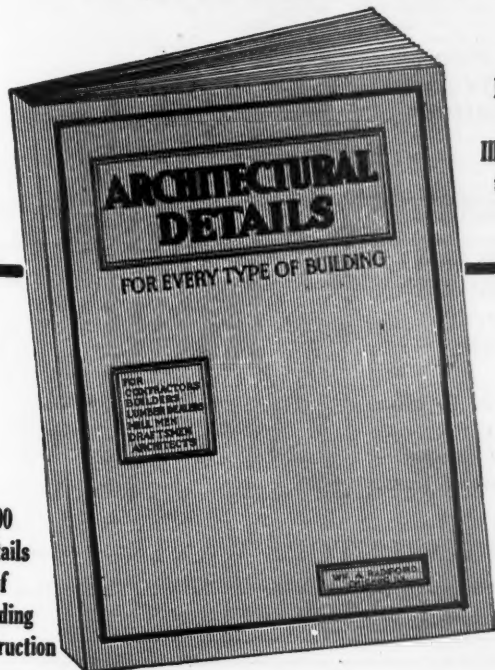
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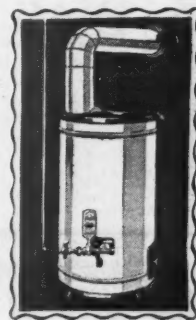
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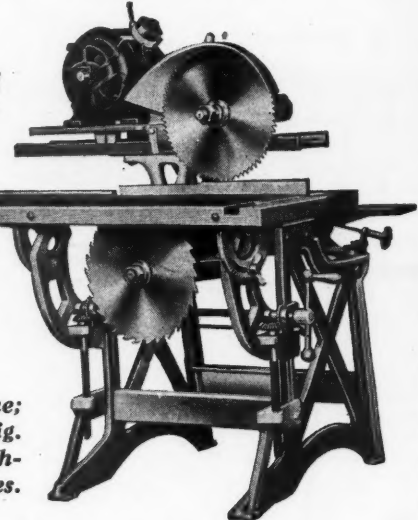
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Sold on
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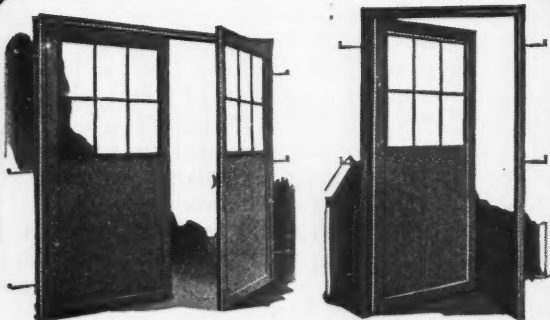
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Ball bearing through-
out. 5 different sizes.



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GARCY BRAND Pilaster Standards and Adjustable BRACKETS

Easiest, quickest, most economical to install for
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ADJUSTABLE SHELVING

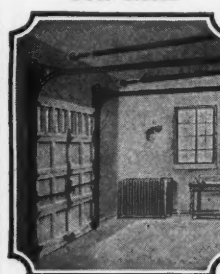
in China closets—Butler pantries and
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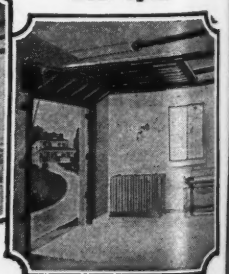
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Door Closed



Door Open

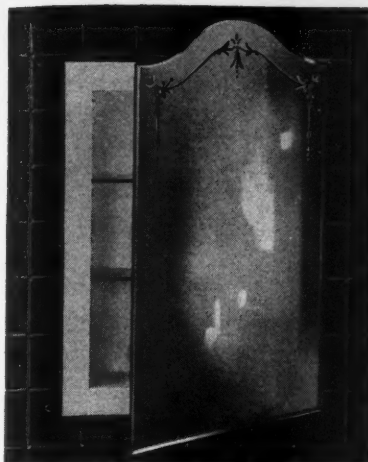


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The New Excel Venetian Recess Cabinets

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The following features will be found in Excel Venetian and Vanity type cabinets: Doors hung on invisible hinges, and doors strike against rubber bumpers; mirror supported by ledge at bottom of door and held in position by metal clips of non-tarnishing or corrosive material; mirrors are of the highest quality beveled plate glass with a very artistic design cut into the mirror; these cabinets have adjustable plate glass shelves supported by aluminum brackets; body of cabinet heavy metal furniture steel and finished with the highest quality baked enamel; we guarantee Excel construction features will prevent mirror breakage when cabinet is in use; Excel cabinets measure up to the name Excel.

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Jamestown, New York
Please send me your free catalog and prices.
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3 Rooms—One Schluter— 2 Rooms—4 Other Surfacers

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WILL MAKE MONEY FOR YOU

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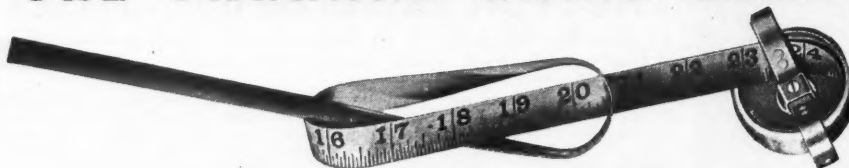
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RIGID and FLEXIBLE

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"EBCO" with Dish Pan BUILT-IN!

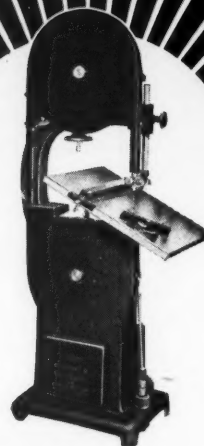
Combines beauty and greater utility. The "EBCO" is the sensation of exhibition homes everywhere. Beautiful, durable porcelain enameled in one solid piece—washing and drying compartments that are always in readiness—need no storage space—no ridding up. Washing dishes and preparing foodstuffs are easy tasks with the "EBCO."



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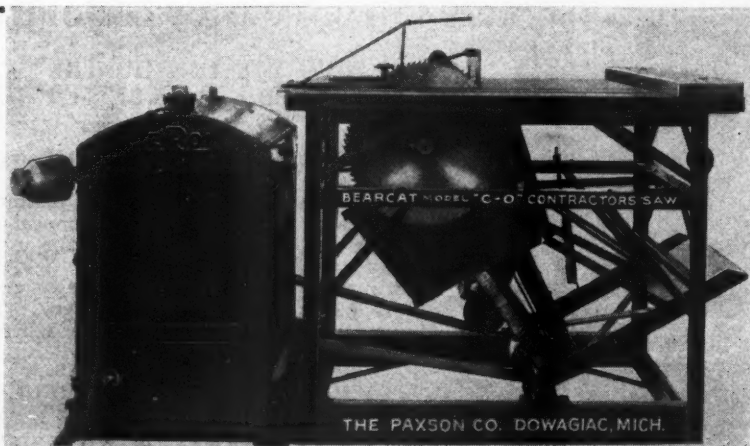
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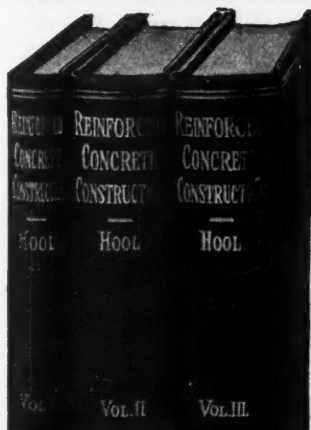
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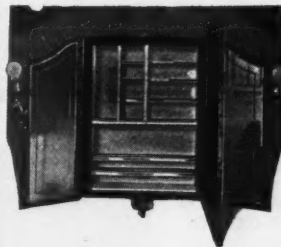
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I'd like to know about your new line of cabinets.
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Price Includes
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18 Tools In One

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THE S & B 8-in. COMBINATION SAW (18 tools in one) is the ideal machine for the shop, factory or the home: will rip, cross cut, bevel, miter, mortise, groove, drill, tenon, grind, rabbet, buff and polish. Motor is mounted on a base that is a part of the machine proper. Run from any light socket also provides for other purposes when the saw is not in use. Complete with attachments and price includes 1/3 H. P. Motor, 60-Cycle, 110-Volt A. C. Price \$35.00 F. O. B. Chicago. Shipping weight 100 lbs. (Planer attachment to fit on table top will smooth pieces up to 2 inches wide, \$9 extra.)

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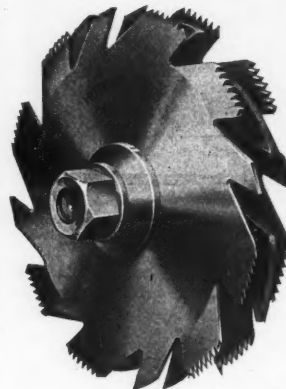
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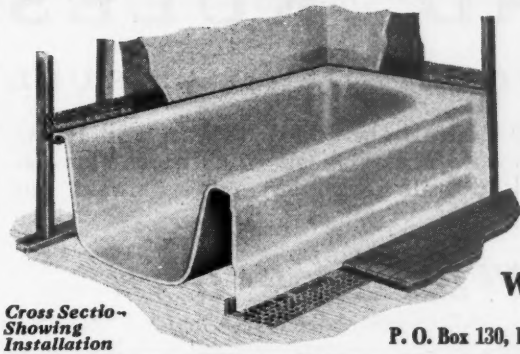
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The Perfect Insulator



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Adds Protection and Comfort to Your Home

Mineral Wool, placed in the walls, floors and rafters of a building, is an unfailing shield against the elements. It keeps the heat where it belongs—inside in Winter and outside in Summer.

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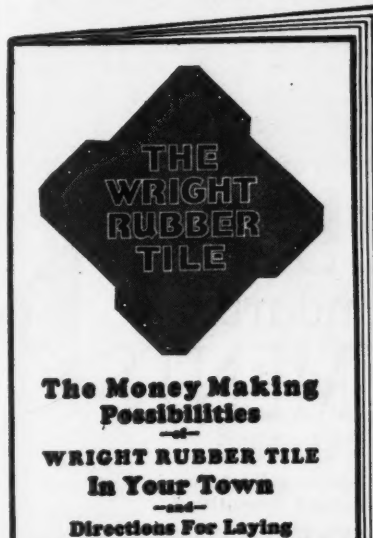
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Send me your free bulletin F-33 with large illustration of "Sterling" Convertible Level, describing its many uses and giving details of free trial offer and easy terms on which it can be secured.

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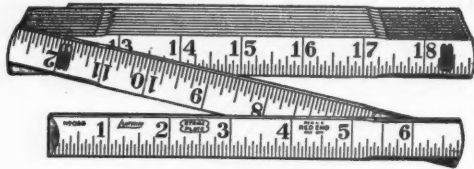
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Hard Enamel Finish, Brass Strike Plates, and Rust-Proof Spring Joints make these rules most serviceable. Bright Red Ends give them a very smart appearance.

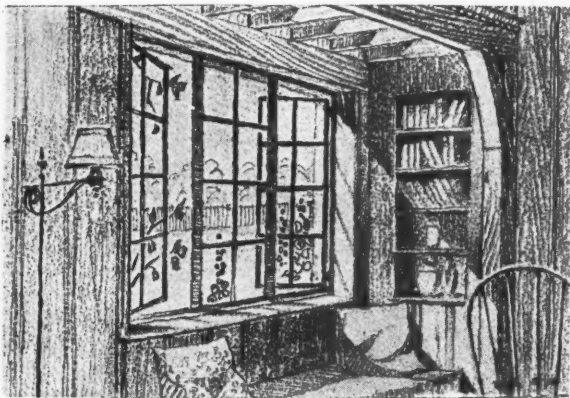
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For Modern Homes



TRUSCON Standard CASEMENTS

MODEL NO 5

In single and combination
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Warehouses and Offices in all Principal Cities



Fast Discharge!

FAST discharge because of the high narrow drum that, in this size mixer, means thorough mixing

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— not the cheapest but the high speed performer and the outstanding long service mixer in its field.

Dandle—5-S, 7-S, 10-S—5-S single cylinder; 7-S two or four cylinder; 10-S four cylinder radiator cooled Ricardo head gasoline engine. Rubber tires with steel disc wheels or rimmed wheels. Complies with A. G. C. standards.

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A4713 3/4



Model 501

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Write for further information on KORNAU guaranteed WOODWORKERS

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BRACE, MADE OF
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REINFORCING
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STEEL ROD
ROLLED IN
TOP OF TRAY

PRESSED STEEL
DUMP GUARD

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LEGS AND BRACES
OF HEAVY
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HEAVY SHOES
CLAMPED
AROUND LEGS

NEVER-SLIP AXLE
SCREWED INTO
WHEEL BEARINGS

THE above cut shows construction of the frame as used on F-line wheelbarrows. The legs and leg stretchers are of channel iron in one unit, hot-riveted together. The leg or bearing surfaces are bent square instead of round. These broad flat surfaces give substantial bearings on the ground, which keeps the barrow steady and in a secure position when being loaded.

The legs are set in grooves when attached to the handle, these being reinforced by cross channel stretchers bolted. All bolts have lock washers.

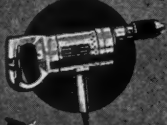
The Improved F-Line of Wheelbarrows are the result of nearly a half century of manufacturing. They are correct in design and rigid in construction.

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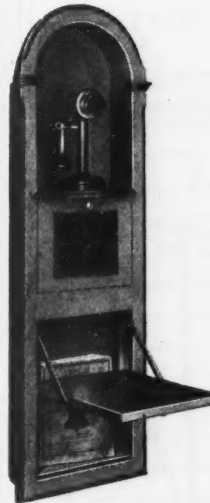
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STANDARD UNIT
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New, attractive, practical—this Kitchen Maid Telephone Niche is one of the most convenient built-in features a home or apartment can have. Directly below the telephone shelf is a small compartment for the bell box. Beneath this is a neat panel, which, when opened, is a strong, rigid chair—a comfortable seat for the longest conversation. Close the panel, and the chair is out of sight. In the chair compartment also is ample space for the largest telephone book. This unique Kitchen Maid unit will bring the final touch of convenience and attractiveness to any home or apartment—and increase re-sale or rental value. Prices, delivered east of the Rockies: unfinished at \$16.50; brown mahogany or walnut varnish, Olive Green or Mandarin Red lacquer at \$20; two-tone Olive Green or Mandarin Red lacquer at \$22. *Mail coupon below.*

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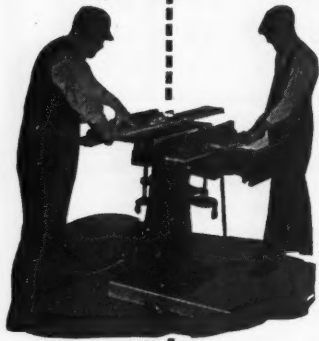
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Use the

SAFE, SAVING, STURDY

Reliable Scaffold Brackets

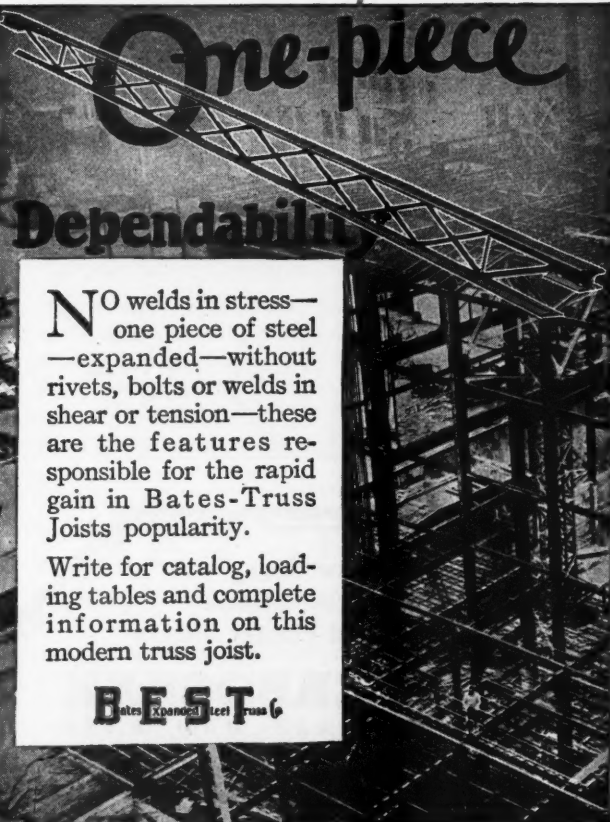
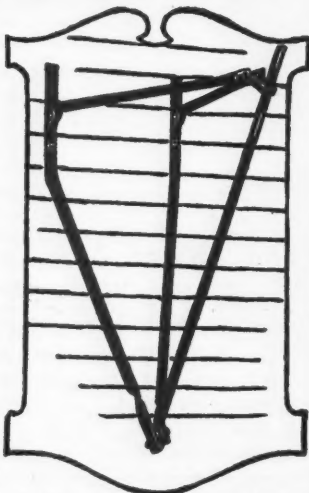
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No holes to plug after they are removed

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Thousands of other wise builders are using them—have used them for years. What they will save you will surprise you.

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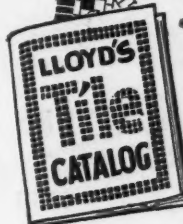
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Make a girl's complexion, look like what it ain't."*

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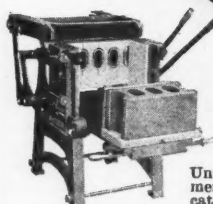
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Profit—Profit—Profit—it's nearly all profit this big money making business of supplying to your territory beautiful porch and garden pottery. They sell on sight. Big demand everywhere. Mr. Stanley cleared \$2,165 with \$100 invested in Utility molds. Get started now. Send for Utility book which shows how men are doubling their incomes in spare time. We show you how to start on investment as low as \$23.

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Here is your big chance with a recently organized, well-financed company with every prospect of becoming the national leader in its field. Its problem now is to locate the right man for Sales Manager.

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Expansion Bolts

Ackerman-Johnson

What are the compelling reasons why ACKERMAN-JOHNSON Expansive Screw Anchors have become the most popular type with Electricians and the various Trades Mechanics everywhere?

Because in comparison with the work and uncertainty in setting the older type Expansion Bolts for making fastenings to concrete and masonry generally, it becomes an actual pleasure to set the ACKERMAN-JOHNSON.

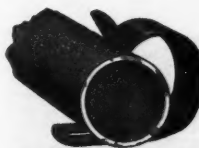
Because there is distinct fascination in so easily setting so small a device with a realization of the tremendous load it can hold.

Because there is great satisfaction in leaving a job knowing it could not have been better done.

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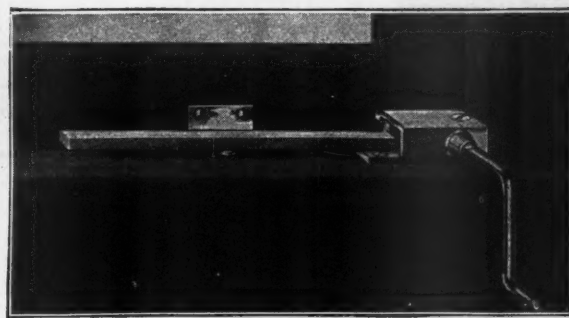


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← 1 1/2" →
For Stools as
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No. 94 Casement Operator

A narrow operator for outswinging casements which completes a 90° swing in 3 1/4 turns of the handle. Locks automatically wherever halted. Fly screens remain undisturbed. Remarkable efficiency in minimum space.



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RIXSON Builders' Hardware

Overhead Door Checks
Floor Checks, Single Acting
Floor Checks, Double Acting
Olive Knuckle Hinges
Friction Hinges

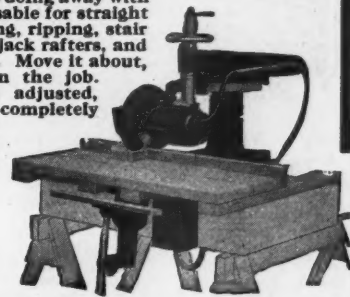
Casement Operators & Hinges
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CRESCENT Universal Cut Off Saw

Turns Dimes into Dollars!

WHAT a great money maker this machine is! Uses about ten cents worth of electricity in an hour; and by doubling and trebling a man's production over hand work, it easily earns between one and two dollars clear money in that short time; besides doing away with all drudgery. Indispensable for straight cutting off, angle cutting, ripping, stair routing, under-cutting jack rafters, and many other operations. Move it about, set it up anywhere on the job. Full powered, quickly adjusted, accurately graduated, completely guarded. Full satisfaction guaranteed. Write for particulars.



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Send booklet showing the many uses of the Crescent Universal Cut-off Saw

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Safety Worm Geared Winches
—made in eight sizes, 100 to
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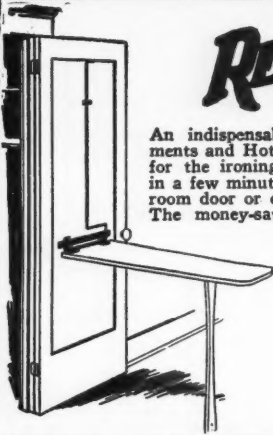
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Manufactured by

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Beautiful Brick Effects

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**Anchor Brand
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Capture Big Profits

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Make Blocks, Brick & Tile for Less! Money!

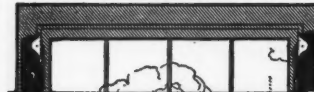


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Here is beauty, too; the touch of color and all the charm of the Old Spanish Terra Cotta.

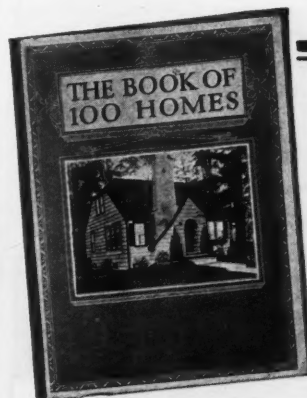
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...take paint without weathering, being chemically treated.
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Trucks: $\frac{3}{4}$ -ton "Special Delivery", 1-ton "Six-Speed Special", $1\frac{1}{4}$, $1\frac{1}{2}$ and 2-ton Speed Trucks and Heavy-Duty Trucks up to 5-ton. Write for information.

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on plumbing, heating, hardware, paint, roofing. Large quantity buying enables us to offer Grade "A" merchandise at great savings.

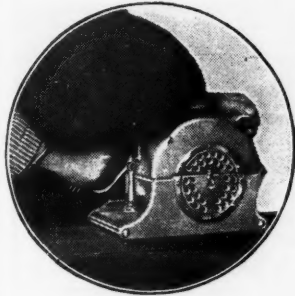
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Positive control insures perfect results even with inexperienced operators.



May be used as bench sander or inverted in special base as a jointer. Floor surfacing attachment.

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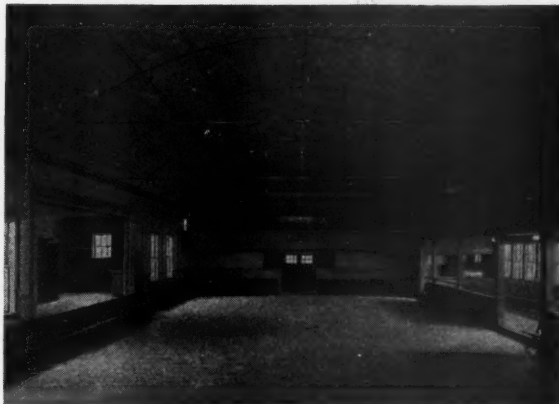
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Trussless ARCH ROOFS

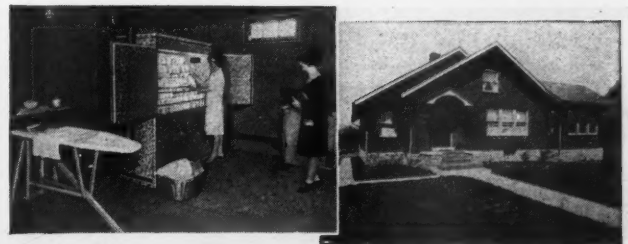
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Send me Lamneck information for builders.

Name

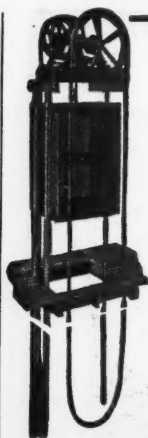
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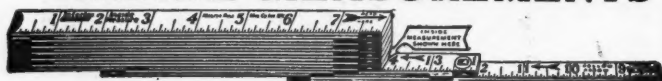
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LOWEST PRICE AND EASIEST TERMS EVER OFFERED. Complete in every detail. NEW MACHINE GUARANTEE. \$1 down and we ship. No delay. No red tape. 10 day Free Trial. Carrying case included if you act now. Write for \$1 down offer.

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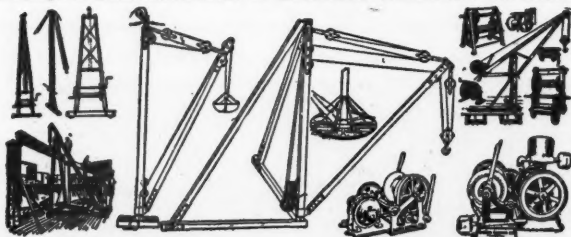
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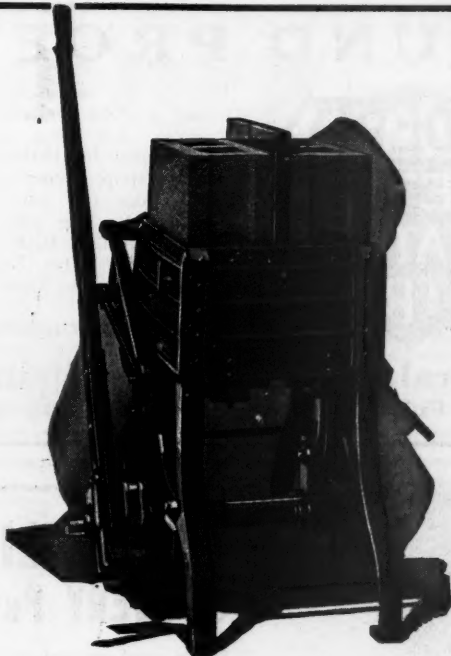
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WITH Multiplex in your yard, you can get those concrete block construction jobs that would otherwise slip by. It will pay you to investigate Multiplex. There is a style for every concrete block requirement. Complete catalog on request.

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The Speedster will perform all woodworking operations and do it in 1/10th the time required by hand.

Built of steel throughout the Speedster is light enough to be readily portable and still sturdy enough to stand rough handling.

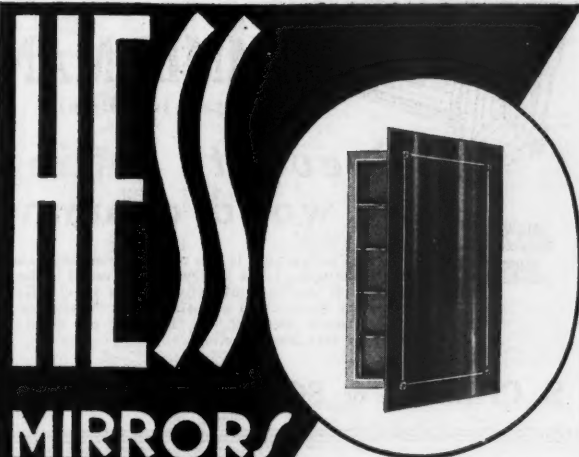
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Gentlemen: Please send bulletin and full details on the new Speedster.
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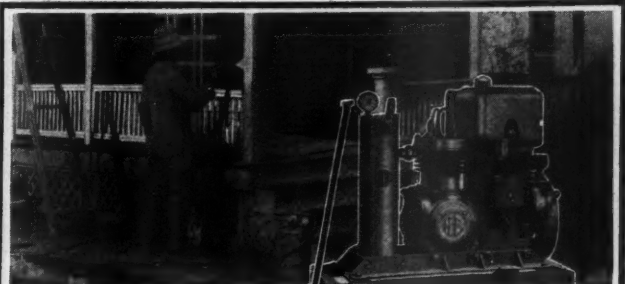
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Please send complete details of your paint spray line, easy terms and trial plan, without obligation. Interested in ☐ Gas engine drive

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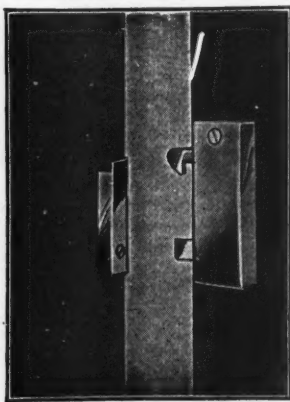


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Installed at a good profit to Builders and a great comfort, convenience and economy to home owners or tenants. No soot, smoke, danger or worry. The only hot water heater that prevents waste of hot water when user forgets to close faucet tightly. Power companies grant low rates—lower than lights—to make this service available to everyone.

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Patent Applied For

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Designed especially for concealed panels. May also be used on doors, instead of ordinary latch. When door is closed no hardware is visible. To close push lightly on door—to open push hard. Door moves less than $\frac{1}{4}$ ". Shrinking or swelling will not affect this latch as long as door swings free.

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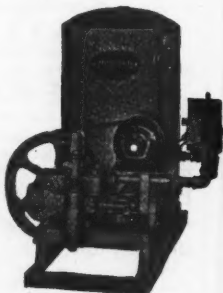


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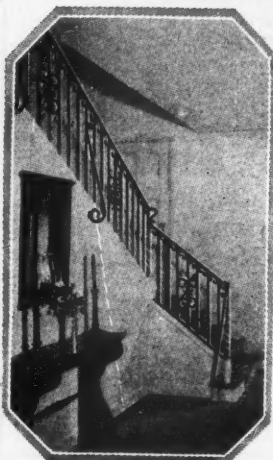
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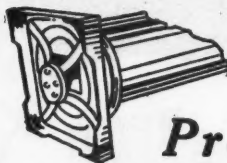


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Save 1/2 **PLUMBING-HEATING**
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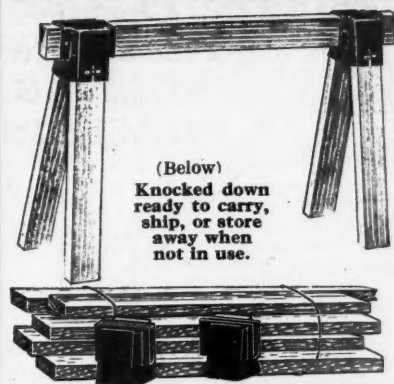
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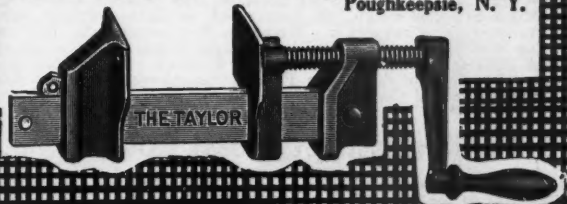
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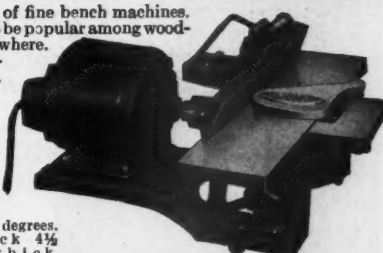
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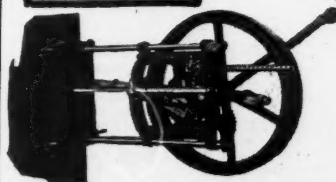
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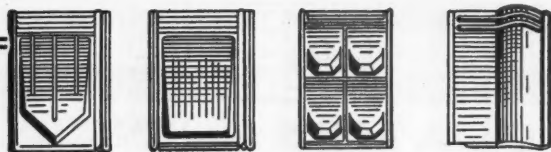
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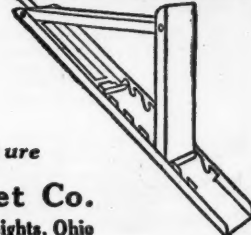
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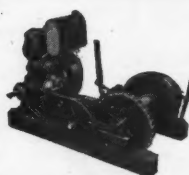
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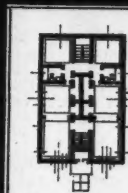
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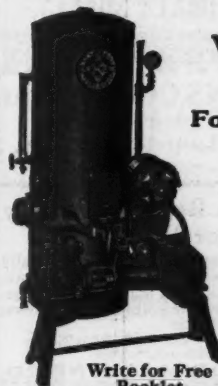
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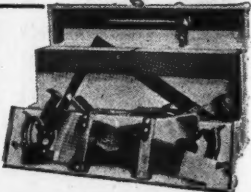


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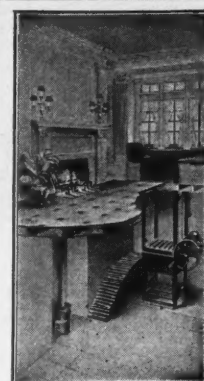


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Economy~*

Mortar spreads like butter on this new small mesh KNO-BURN, JR., Metal Lath.

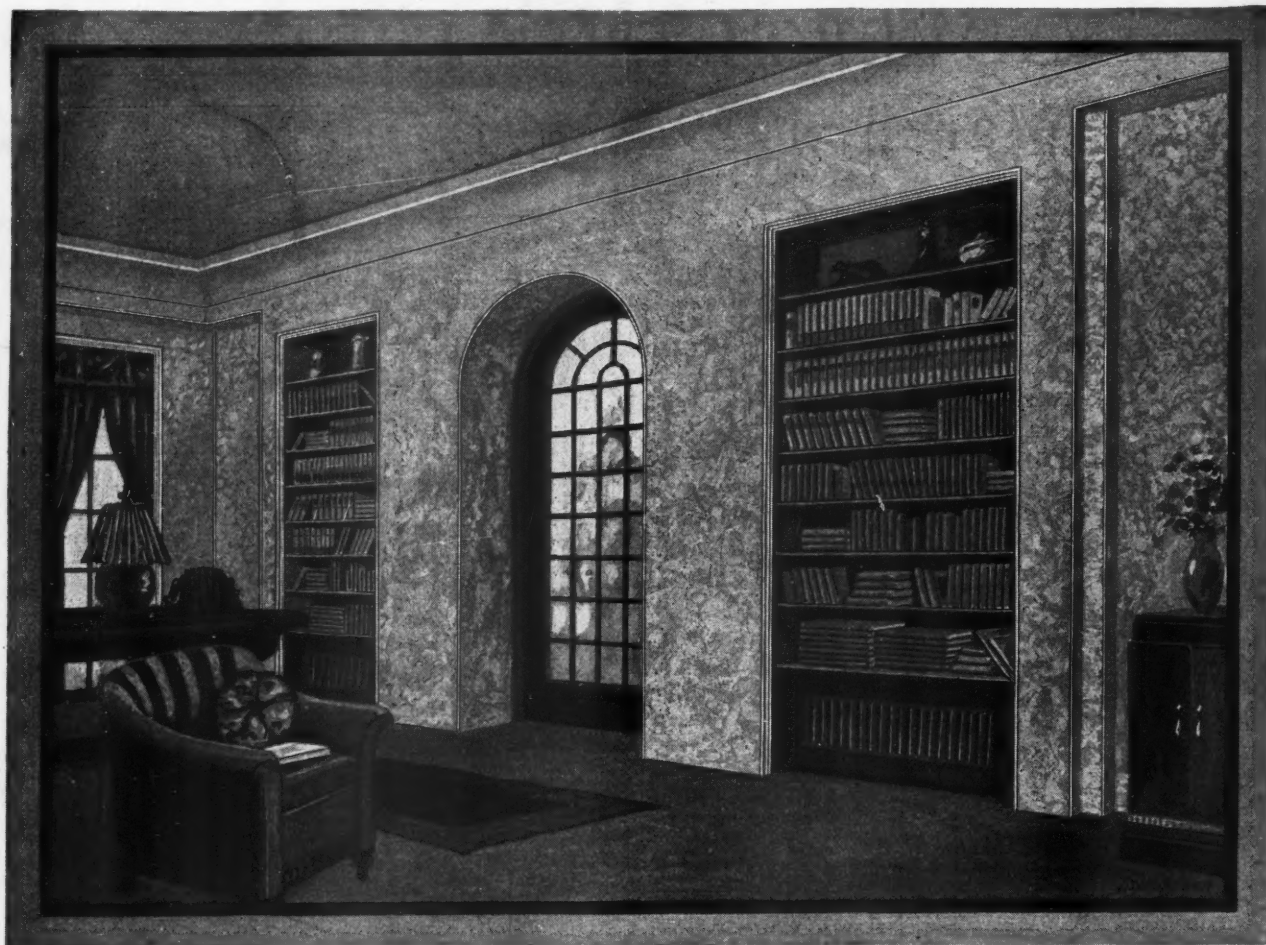
Zip! The steel is properly embedded by the scratch coat. ★ You look at the back. Lo! an adequate, but uniformly small "key." No excess or dead weight.

Practically no "droppings." ★ Mortar and steel tightly bonded by thousands of additional "locking keys." ★★ Of course, builders are enthusiastic over KNO-BURN, JR. Send for samples and see for yourself why.



KNO-BURN
JR.

NORTH WESTERN EXPANDED METAL CO.
1203 OLD COLONY BUILDING CHICAGO



Much of the Charm of this Room is Due to *MILCOR* Products

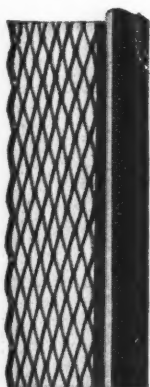
THE designing of this interior offered several problems that were happily solved with Milcor Products. The result was a room of extraordinary charm.

The deep book recesses were framed with a narrow metal casing of O. G. pattern (Milcor Expansion Casing No. 6) which, finished with the wall, produces an effective new style of interior that is having a remarkable acceptance among owners and builders of better class homes.

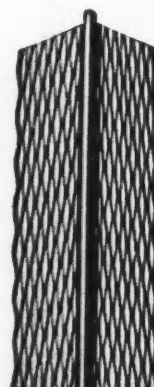
Depth for the book shelves and for the deep plastered doorway was obtained by two offsets from the rest of the wall. The resulting corners were formed on and protected by Milcor Expansion Corner Beads. These beads play an interesting part in the design character of the room. The textured plastering of the room is protected by a base of Milcor Stay-Rib Metal Lath No. 1, a rigid, expanded steel reinforcement, good assurance against quick spreading fire and plaster cracks.

Milcor Manual is the Contractors' data book covering these products.

Sent free, if it is not in your library. "Modern Modes in Better Plastering" will interest prospective home builders.



EXPANSION
CASING



EXPANSION
CORNER BEAD

MILWAUKEE CORRUGATING COMPANY, Milwaukee, Wis.

Eastern Plant: THE ELLER MANUFACTURING CO., CANTON, OHIO

Branches and Sales Offices: Chicago, Ill., Kansas City, Mo., La Crosse, Wis., Boston, Mass., Detroit, Mich., Atlanta, Ga., Little Rock, Ark., Minneapolis, Minn.

MILCOR PRODUCTS
STAY-RIB METAL LATH No. 1

